



HILLSBOROUGH COUNTY MPO



City of Tampa Walk-Bike Plan Phase II

Final Report

July 2012



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Acronyms

MPO – Metropolitan planning organization
LRTP – Long range transportation plan
CBD – Central business district
AFB – Air force base
COT – City of Tampa
Hart – Hillsborough Area Regional Transit
RRFB – Rectangular rapid flashing beacon
CIP – Capital improvement program
TWLTL – Two-way left turn lane
ROW – Right of way
MUTCD – Manual on Uniform Traffic Control Devices
HECW – High emphasis crosswalk
AASHTO – American Association of State Highway and Transportation Officials
AADT – Annual average daily traffic
TMC – Turning movement count
FDOT – Florida Department of Transportation
TECO – Tampa Electric Company
HAWK – High Intensity Activated Crosswalk

Executive Summary

In 2009, the City of Tampa updated its Comprehensive Plan to encourage growth within Tampa's three core "Business Centers" (Downtown, Westshore, University of South Florida-USF), along major transit corridors and within designated "Mixed Use Corridors and Villages." This vision for infill and urban redevelopment is predicated on enhancing the mobility options available to people so that they can move about the City without relying exclusively on automobiles. One aspect of providing enhanced mobility options, consistent with the City's Comprehensive Plan and the Hillsborough County Metropolitan Planning Organization's (MPO) 2035 Long Range Transportation Plan (LRTP), is the identification, prioritization, and eventual implementation of cost-feasible bicycle and pedestrian infrastructure projects.

In 2011, the Hillsborough County MPO working in close coordination with the City of Tampa produced a plan which identified low-cost options to enhance bicycle and pedestrian mobility around the three "Business Centers" identified in the City's Comprehensive Plan. Phase I of the City of Tampa Walk-Bike Plan identified feasible project candidates along approximately thirty roadway corridors in and around the Downtown, USF, and Westshore areas.

Following the successful completion of the Phase I Walk-Bike Plan, again working in close coordination with the City of Tampa, the MPO has completed Phase II of the City of Tampa Walk-Bike Plan. This Phase expands the Plan beyond the three business centers to identify bicycle and pedestrian candidate projects to complete a network within the Interbay Peninsula and throughout west, central, and east Tampa. In addition to this general objective, Phase II of the Walk-Bike Plan is intended to identify candidate projects to:

- Provide for cross-city North-South and East-West connections including a USF to Downtown connection
- Help implement strategies emerging from the "Green Artery" initiative
- Enhance connectivity between Harbour Island and Downtown
- Enhance mobility on Davis Islands
- Connect South Tampa to MacDill Air Force Base (AFB).
- Provide connections to East Tampa/40th St.
- Provide connections to City of Tampa Greenways and Trails off-road facilities.
- Provide connections to significant Hillsborough County and Temple Terrace bike facilities.
- Address safety and connectivity issues related to the top twenty (20) Hillsborough Area Regional Transit (HART) bus stops.

Consistent with Phase I of the Walk-Bike Plan, Phase II primarily considered adult cyclists and pedestrians making commute trips or shopping trips. In part, because of this user-market orientation, candidate project development focused on the City/County-maintained collector and minor arterial street system because these roadways provide for longer, contiguous routes that are generally necessary for these trip purposes. Other reasons that the Plan focuses on minor arterial and collector streets include the fact that these roadways:

- tend to have lower automobile speeds and volumes than major arterial roadways and are therefore more approachable for a broader spectrum of cyclists and pedestrians
- are not generally under State jurisdiction and therefore do not benefit from bicycle and pedestrian enhancements implemented as part of the Florida Department of Transportation (FDOT) Rehabilitation, Restoration, and Resurfacing (3R) program
- are generally part of the Federal Aid Highway System and therefore eligible for federal funding directed by the MPO.
- are more likely to cross limited access highways, railroad tracks, and the Hillsborough River
- generally provide for signalized crossings at other major roadway intersections
- may be under-utilized by automobile traffic and therefore provide opportunities to implement road diet and/or lane diet projects (as discussed below)

Subsequent phases of the Walk-Bike planning process may be undertaken by the City and/or MPO to consider candidate projects in the University North District, commonly referred to as “New Tampa,” and/or to focus more directly on integration with the Greenways and Trails Master Plan and provide greater consideration for more novice cyclists and pedestrians.

To minimize potential project costs and thereby facilitate project implementation, Walk-Bike Plan candidate projects were developed to avoid right-of-way impacts and to avoid/minimize (re)construction of roadway curb and drainage structures. A handful of the candidate projects may require abatement of private encroachment on public right-of-way or installation of paved shoulder. In general, the type of candidate projects identified by the Walk-Bike Plan includes:

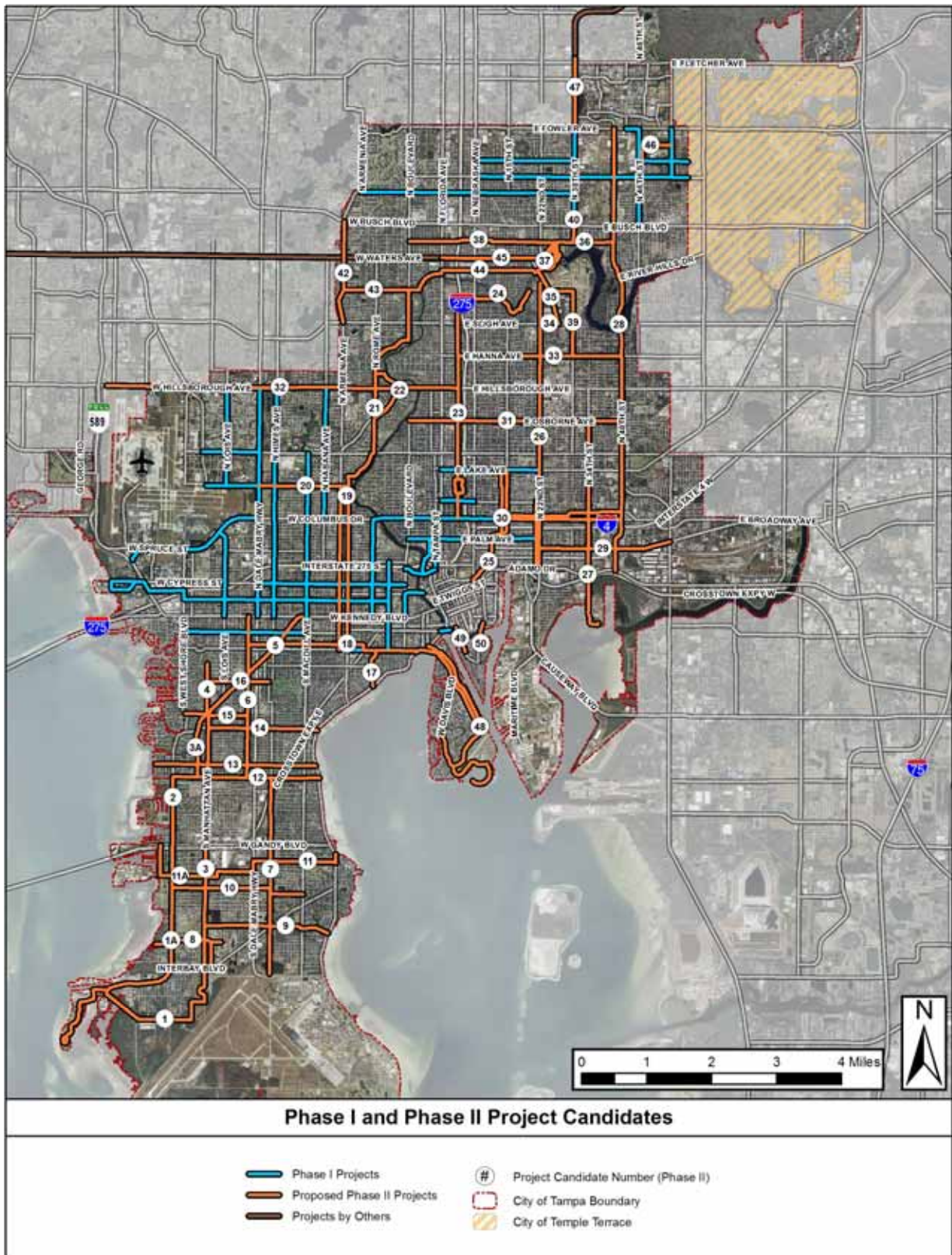
- Sidewalk projects to complete segments in the sidewalk network along Walk-Bike project corridors
- Modification of automobile travel lane widths to provide for marked bike lanes or wide outside lanes
- Installation of shared lane arrow markings, commonly referred to as “Sharrows”)
- Provision of multi-use pathways—especially when on-road bicycle travel cannot be accommodated by providing marked bicycle lanes or shared lane arrows due to limited roadway cross-section or excessive travel speeds/volumes.
- Crosswalk and intersection safety enhancements including consideration of Rectangular Rapid Flashing Beacons (RRFB), enhancements to existing crosswalk geometry or signalization, and consideration of enhancements to intersection area/crosswalk lighting
- Enhancements to/prioritization of greenways and trails projects to the extent that these projects contribute to the overall bicycle and pedestrian mobility network
- Consideration of “Road Diet” candidates where the reduction in general-purpose travel lanes can provide for improved infrastructure for cyclists and/or pedestrians
- Identification of access issues in the vicinity of high-volume bus stops and discussion of potential mobility/safety countermeasures

While some of the project candidates identified in the Walk Bike Plan will require additional traffic analysis, detailed design, and dedicated funding, many of the project candidates can be prioritized and implemented as part of the City’s existing sidewalk and Complete Streets programs. Bike lane and shared lane arrow marking projects may be implemented with little or no marginal cost if constructed as part of planned roadway resurfacing projects; however, the implementation timeframe of these projects will reflect a balance between the relevance of the project from a mobility standpoint with the overall priorities of the City’s roadway maintenance program.

Within the Plan, a series of “road diet” projects are discussed as candidates. Due to the potential impacts on roadway capacity and vehicular travel, these projects should be carefully reviewed with a detailed engineering study and cooperation with and input from the impacted neighborhood(s) and businesses. It is also important to note that in several instances multiple parallel candidate projects are identified. The intent of identifying multiple options is to allow for flexibility in Plan implementation and to establish a relatively dense grid of mobility options over the long-term. It is reasonable that initial implementation of the Plan will not address every parallel option identified in the Plan. Finally it is important to note that all projects identified in this Plan are “candidates” and their implementation is subject to the availability of funding, a final determination of technical feasibility (beyond the scope of this Plan), and adequate consideration of public input.

Phase I and Phase II Walk-Bike Plan project candidates are shown in Map A on the following page. Phase II Candidate project summaries are provided in Table A and discussed in detail throughout the remainder of this report. The Phase I project report is available on the Hillsborough MPO’s website at:

http://www.hillsboroughmpo.org/pubmaps/pubmaps_folders/draft-publications/walk-bike-implementation-plan-for-city-of-tampa



Map A: Phase I Projects

Table A: Phase II Candidate List

South Tampa					
Corridor	On	From	To	Improvements	Page #
1	Boundary Blvd	Picnic Island Park	Interbay Blvd	Proposed sidepath as part of the City's Greenways & Trails Master Plan	1
1A	Westshore Blvd/Commerce St	Picnic Island Park	Interbay Blvd/Commerce St	Install shared lane markings	3
		Interbay Blvd/Commerce St	Dolphin Pointe Apartments Cir		
		Dolphin Pointe Apartments Cir	Gandy Blvd	Install shared lane markings in the short term. Long term consider reworking section to provide bike lanes.	
2	Westshore Blvd	Gandy Blvd	Euclid Ave	Install sidepath along west side. Redevelopment of Georgetown Apartment site may widen for turn lanes, incorporate bike lanes into this project if possible.	5
3	Manhattan Ave	Interbay Blvd	W Bay Ave	Existing sidepath on east side. Install HECW on east leg of Manhattan/Interbay. Construct sidepath from Manhattan/Interbay to Tanker Way through City owned parcels. Install shared lane markings on Tanker Way to MacDill AFB.	8
		W Bay Ave	W Iowa Ave	Widen/replace sidewalk along west side with a 12 foot sidepath.	
		W Iowa Ave	Legacy Park Dr	Existing sidepath on west side.	
		Legacy Park Dr	Price Ave	Widen/replace sidewalk along west side with a 12 foot sidepath. Improve rail crossing. Minor drainage improvements may be needed for sidepath.	
		Price Ave	Gandy Blvd	Price to McElroy, sidepath on west side. Install HECW at McElroy. McElroy to Gandy install shared lane markings.	
		Gandy Blvd	El Prado Blvd	Existing bike lanes	
		El Prado Blvd	Henderson Blvd	Restripe with unmarked bike lanes to a 3.5/10/10/10/10/3.5 foot lane configuration. Another option is to restripe with shared lane markings to a 13.5/10/10/10/13.5 foot lane configuration.	
4	Manhattan Ave	San Jose St	Morrison Ave	Install shared lane markings. Convert angled parking to parallel. Widen sidewalk on NW corner of Manhattan/Henderson to San Jose St.	16
5	Henderson Blvd	Manhattan Ave	Kennedy Blvd	Possible lane diet to a 3 lane section with bike lanes and a TWLTL.	18
6	Church Ave	Euclid Ave	Kennedy Blvd	Install shared lane markings. Install/upgrade pedestrian crossings to HECW at Swann, Henderson, Bay to Bay, El Prado, and Euclid.	20
7	Himes Ave	Gadsden Park	Gandy Blvd	Install shared lane markings. Reconstruct sidewalk connect to Gadsden Park trail. Add connection from trail to MacDill Ave and install bicycle signage on MacDill.	22
		Gandy Blvd	Crosstown Expressway	Existing bike lanes. Upgrade to HECW at Himes/Gandy.	
8	Staunton St	Sherrill St	Westshore Blvd	Existing sidepath	24
	Westshore Blvd	Staunton St	Everett Ave	Existing sidepath along west side. Extend path to north side of Everett Ave. Install enhanced crossing with RRFB across Westshore.	
	Everett Ave Easement	Westshore Blvd	Manhattan Ave	Install a bicycle/pedestrian pathway with lighting and railroad crossing.	
	Everett Ave Easement	Manhattan Ave	Lois Ave	Install bicycle/pedestrian pathway with lighting through School Board parcel along north side of canal.	
	Everett Ave Easement	Manhattan Ave	Tanker Way	Install bicycle/pedestrian pathway with lighting along easement, south to Tanker Way. Provide HECW across Interbay Blvd.	
9	Mango Ave	Manhattan Ave	Dale Mabry Hwy	Install shared lane markings	29
	Mango Ave Easement	Dale Mabry Hwy	MacDill Ave	Install bicycle/pedestrian pathway. Enhance Interbay/Himes intersection with HECW and RRFB. Connect to north side of Averill Ave/MacDill Ave intersection and provide HECW and RRFB on north side.	
	Averill Ave	MacDill Ave	Bayshore Blvd	Install shared lane markings. Install HECW and RRFB at Bayshore/Averill intersection.	
10	Oklahoma Ave	Westshore Blvd	Himes Ave	Install shared lane markings. Install HECW at Manhattan, the west leg of Sterling, and Himes. Install HECW and pedestrian signals/push buttons on north leg of Dale Mabry/Oklahoma.	32
	Himes Ave	Oklahoma Ave	Wyoming Ave	Install HECW at Oklahoma/Himes. Construct a sidepath along east side.	
	Wyoming Ave	Himes Ave	MacDill Ave	Install shared lane markings and HECW at MacDill Ave.	

11	Pearl Ave	Westshore Blvd	Dale Mabry Hwy	Install shared lane markings. Install HECW and RRFB at Pearl/Westshore.	34
	Dale Mabry Hwy	Pearl Ave	Ballast Point Blvd	Existing bike lanes. Install HECW and RRFB at Pearl/Dale Mabry.	
	Ballast Point Blvd	Dale Mabry Hwy	Bayshore Blvd	Install shared lane markings. Relocate pedestrian signal to Ballast Point/MacDill intersection.	
	Bayshore Blvd	Ballast Point Blvd	Interbay Blvd	Install sidepath along west side. Upgrade to HECW at Bayshore/Interbay.	
11A	Bridge St	Gandy Blvd	Tyson Ave	Install sidepath. Part of the City's parks plan.	36
	Tyson Ave	Bridge St	Westshore Blvd	Install shared lane markings. Install HECW and RRFB at Tyson/Westshore.	
	Tyson Ave	Westshore Blvd	Manhattan Ave	Construct a bicycle/pedestrian pathway adjacent to the canal.	
	Tyson Ave/Lois Ave	Manhattan Ave	Pearl Ave	Install shared lane markings	
12	Pearl Ave	Lois Ave	Dale Mabry Hwy	Install shared lane markings	38
	Euclid Ave	Westshore Blvd	Bayshore Blvd	Existing shared lane markings	
13	El Prado Blvd	Beach Dr	Westshore Blvd	Perform a lane diet from 4D to 2D with bike lanes.	39
	El Prado Blvd	Westshore Blvd	Manhattan Ave	Perform a lane diet from 4D to 2D with bike lanes.	
	El Prado Blvd	Manhattan Ave	Lois Ave	Perform a lane diet from 4D to 2D with bike lanes and on street parking.	
	El Prado Blvd	Lois Ave	MacDill Ave	Perform a lane diet from 4D to 2D with bike lanes.	
	El Prado Blvd	MacDill Ave	Bayshore Blvd	Install shared lane markings. Install HECW and RRFB at Bayshore/El Prado.	
14	Bay to Bay Blvd	Manhattan Ave	Bayshore Blvd	Perform a lane diet to convert from 4D to a 3 lane section with TWLTL and bike lanes.	45
15	San Jose St	Westshore Blvd	Manhattan Ave	Install shared lane markings. Review for removal of dual EB LTL.	47
	Palmira Ave	Manhattan Ave	Church Ave	Install shared lane markings	
16	Neptune St	Manhattan Ave	Frankland Rd	Install shared lane markings. Upgrade Henderson and Church crossings to HECW.	48
17	Rome Ave	Bayshore Blvd	Snow Ave	Install shared lane markings. Install HECW and pedestrian refuge island at Rome/Bayshore.	50
	Snow Ave/S Dakota Ave	Rome Ave	Swann Ave	Install shared lane markings. Upgrade Swann/S Dakota crossing to HECW.	
18	De Leon St/Freemont Ave	Church Ave	Swann Ave	Install shared lane markings. Install HECW and RRFB at Howard, Armenia, MacDill, Henderson, and Himes intersections. Install raised ped island at De Leon/Dale Mabry.	52
	Swann Ave	Freemont Ave	Bayshore Blvd	Restripe with bike lanes.	

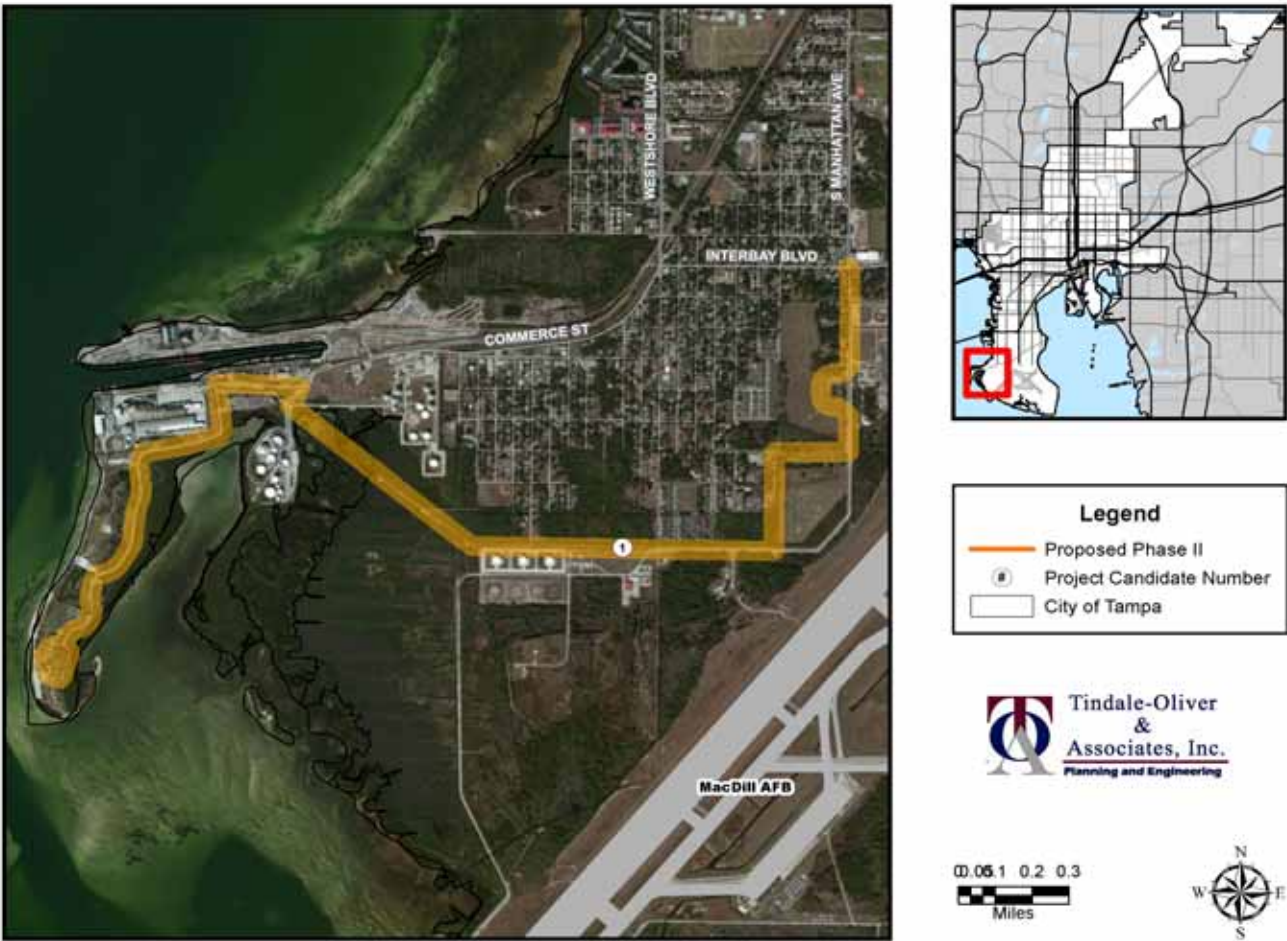
North Tampa					
Corridor	On	From	To	Improvements	Page #
19	Armenia Ave	Swann Ave	Azeele St	Restripe with bike lanes	54
	Armenia Ave	Azeele St	Platt St	Restripe with bike lanes	
	Armenia Ave	Platt St	Cleveland St	Lane Diet. Convert from 4 SB lanes to 3 SB and a bike lane.	
	Armenia Ave	Cleveland St	Kennedy Blvd	Restripe with bike lanes	
	Armenia Ave	Kennedy Blvd	Columbus Dr	Restripe with bike lanes. Possibly remove parking, perform parking utilization study.	
	Armenia Ave	Columbus Dr	Tampa Bay Blvd	Restripe with bike lanes. Possibly remove parking, perform parking utilization study.	
	Howard Ave	Swann Ave	Azeele St	Install shared lane markings.	
	Howard Ave	Azeele St	Cleveland St	Install shared lane markings.	
	Howard Ave	Cleveland St	Kennedy Blvd	Install shared lane markings.	
	Howard Ave	Kennedy Blvd	I-275	Restripe with bike lanes. Possibly remove parking, perform parking utilization study.	
	Howard Ave	I-275	St. Conrad St	Restripe with bike lanes. Possibly remove parking, perform parking utilization study.	
	Howard Ave	St. Conrad St	Aileen St	Restripe with bike lanes and on street parking. Install bulb outs for parking.	
	Howard Ave	Aileen St	Ivy St	Restripe with bike lanes	
	Howard Ave	Ivy St	Braddock St	Restripe with bike lanes	
	Howard Ave	Braddock St	Tampa Bay Blvd	Restripe with bike lanes	
20	Tampa Bay Blvd	Dale Mabry Hwy	Armenia Ave	Install shared lane markings.	61
21	Tampa Bay Blvd	Howard Ave	Armenia Ave	Install shared lane markings.	62
	Howard Ave	Tampa Bay Blvd	Woodlawn Ave	Install shared lane markings.	
	Woodlawn Ave	Howard Ave	N Riverview Ave	Install shared lane markings.	
	N Riverview Ave	Woodlawn Ave	Rome Ave/Dr MLK Jr Blvd	Install shared lane markings. Construct 6-10 foot sidewalk on either side of road	
	Rome Ave at N Riverview Ave			Install HECW and enhance lighting	
	Rome Ave	N Riverview Ave/Dr MLK Jr Blvd	Hillsborough Ave	Install shared lane markings. Construct a 10 foot sidepath along the west side of Rome. Install HECW south of Ferris Ave to provide access to Hillsborough River. Consider a pocket park/pier along river near DR MLK Jr Blvd bridge. Long term consider widening for bike lanes.	
	Rome Ave at Hillsborough Ave			Verify that lighting in crosswalks meets appropriate standards.	
	Rome Ave	Hillsborough Ave	Hanna Ave	Widen existin sidewalk on west side to provide sidepath. Begin addressing ROW use by businesses.	
	Rome Ave at Alicia Ave/Hanna Ave			Install HECW and RRFB on south leg.	
	Alicia Ave/Hanna Ave	Rome Ave	N Blvd	Install shared lane markings. Construct 6-10 foot sidewalk on north side of Alicia from N Blvd to Lambright St. Piping of 100 feet of swal on NW corner of Alicia/N Blvd may be necessary. At Lambright St install HECW and continue sidewalk along south side of Alicia/Hanna to Rome Ave	
	N Blvd	Alicia Ave	Sligh Ave	Install shared lane markings. Pipe swale on west side and construct 6-10 foot sidewalk. Consider pocket park/pier at N Blvd/Alicia Ave easement.	
	N Blvd at Sligh Ave			Upgrade existing crosswalks to HECW. Install lighting on existing strain/utility poles.	
	N Blvd	Sligh Ave	Kirby St	Reconstruct the existing sidewalk on west side to a 10 foot sidepath.	
	Kirby St at N Blvd			Install HECW and RRFB on the north leg crossing. Construct concrete pad on NW corner for existing bus stop.	
	Kirby St	N Blvd	N Rivershore Dr	Install shared lane markings. Construct 6-10 foot sidewalk along north side of Kirby. Install HECW on north side of Kirby/Rivershore intersection.	
	N Rivershore Dr	Kirby St	Florida Ave	Install shared lane markings. Construct linear park along river. Construct 6-10 foot sidewalk along river.	
22	Wishart Blvd	Rome Ave	Lee Pl	Install shared lane markings.	66
	Lee Pl	Wishart Blvd	N Rivershore Dr	Install shared lane markings. Install sidewalks along both sides from Hillsborough Ave to N Rivershore Dr.	
	N Rivershore Dr	Lee Pl	Powhatan Ave	Install shared lane markings	
	Powhatan Ave	N Rivershore Ave	Rome Ave	Install shared lane markings	
23	Central Ave	Columbus Dr	Adalee St	Install shared lane markings. Enhance crossing at Floridbraska and Columbus with HECW and RRFB's.	68
	Emily St/Elmore Ave/ Avon Ave/Adalee St	Around Robles Park		Install shared lane markings. Construct connections into the park.	
	Central Ave	Emily St	Broad St	Install bike lanes	
24	Broad St	Florida Ave	Nebraska Ave	Restripe for bike lanes and restrict parking on the north side.	70
	Broad St	Nebraska Ave	Park Cir	Install shared lane markings and wayfinding signs.	
	Park Cir/Park Dr	Broad St	22nd St Park	Install shared lane markings and wayfinding signs. Long term consider providing pedestrian bridge from 22nd St park to Mulberry Dr.	

25	Twiggs St	Meridian Ave	Nebraska Ave	Existing bike lanes	73
	Nebraska Ave	Twiggs St	Nuccio Pkwy	Existing bike lanes	
	Nuccio Pkwy	Nebraska Ave	7th Ave	Install sidepath along west side	
	12th Ave/Nuccio Pkwy	7th Ave	15th Ave	Install shared lane markings	
	14th St/Avenida Republica de Cuba	12th Ave	Lake Ave	Restripe with bike lanes	
	15th St	12th Ave	Lake Ave	Restripe with bike lanes	
26	21st/22nd St	Adamo Dr	Hillsborough Ave	Sidewalk construction/urban corridor improvements programmed by FDOT	75
	22nd St	Hillsborough Ave	Sligh Ave	Install shared lane markings	
	22nd St	Sligh Ave	22nd St Park	Install shared lane markings	
27	34th St	McKay Bay Nature Park	21st Ave	Perform a lane diet and add bike lanes.	77
	34th St	21st Ave	Lake Ave	Install shared lane markings	
	34th St	Lake Ave	Dr MLK Jr Blvd	Perform a lane diet and add bike lanes.	
	34th St	Dr MLK Jr Blvd	Osborne Ave	Install shared lane markings	
28	40th St	Adamo Dr	I-4	Perform a lane diet and add bike lanes.	80
	40th St	I-4	Hillsborough Ave	Perform a lane diet and add bike lanes.	
	40th St	Hillsborough Ave	Fowler Ave	Existing bike lanes	
29	7th Ave	21st St	24th St	Install shared lane markings	82
	7th Ave	24th St	39th St	Perform a lane diet and add bike lanes.	
	7th Ave	39th St	50th St	Perform a lane diet and add bike lanes.	
30	Columbus Dr	14th St	40th St	Restripe with bike lanes	84
	17th Ave/18th Ave/19th Ave	14th St	40th St	Restripe with bike lanes	
31	Osborne Ave	N Blvd	40th St	Install shared lane markings. Mark the on street parking from N Blvd to Central Ave.	86
32	Hillsborough Ave	Benjamin Rd	Central Ave	Existing bike lanes	88
33	Hanna Ave	Central Ave	40th St	Install shared lane markings	89
34	Sligh Ave	22nd St	Rowlett Park Dr	Construct a 10 foot sidepath along the north side flush with the edge of pavement.	90
35	Rowlett Park Dr	Sligh Ave	Bridge	Construct a 12 foot sidepath along the west side.	93
	Rowlett Park Dr	Bridge	22nd St	Restripe with bike lanes and add share the road signage.	
36	River Hills Dr/22nd St	Rowlett Park Dr	Yukon St	Install shared lane markings	96
	Yukon St	River Hills Dr	40th St	Install shared lane markings.	
37	Rowlett Park Trail			Construct a HECW at River Hills Dr west of 26th Street into the park. Construct the trail improvements shown in the report. Fill the sidewalk gap on the NW corner of the Rowlett Park Dr/22nd St intersection.	98
38	Yukon St	N Blvd	Florida Ave	Install shared lane markings and share the road signs	101
	Yukon St	Florida Ave	Dixon Ave	Install shared lane markings	
	Yukon St	Dixon Ave	Central Ave	Install shared lane markings	
	Yukon St	Central Ave	River Hills Dr	Install shared lane markings. Construct a pedestrian crossing over the RR tracks and complete the sidewalk along then north side of 15th St to the RR tracks.	
39	30th St	Hanna Ave	Rogers Park	Install shared lane markings	103
40	30th St	Yukon St	Busch Blvd	Install shared lane markings	105
41	Parcel north of RR tracks	Rowlett Park Dr	30th St	Construct a 12 foot bicycle/pedestrian pathway with lighting	106
42	Armenia Ave	Sligh Ave	Busch Blvd	Widen and reconstruct to a 2 lane enhanced section with bike lanes and left turn lanes at key locations. Start enforcing ROW. A further engineering study of this roadway is recommended.	107
43	Kirby St	Armenia Ave	N Blvd	Install shared lane markings. Evaluate the need for a marked crosswalk with a beacon at Armenia/Kirby. Evaluate Armenia/Kirby against signal warrant criteria.	109
44	Bird St	Florida Ave	K-Mart Driveway	Widen for bike lanes.	111
	Bird St	K-Mart Driveway	Dog Track Driveway	Perform a lane diet, converting outer travel lane to a bike lane. Convert NBT/NBL lane on I-275 off ramp to a NBT lane.	
	Bird St	Dog Track Driveway	Nebraska Ave	Perform a lane diet, converting outer travel lane to a bike lane. Restripe the hatched portion on the SW corner of Bird/Nebraska to have a EBL, EBT, Bike Keyhole, EBR configuration.	
	Bird St/Mulberry Dr	Nebraska Ave	Rowlett Park Dr	Install shared lane markings. Complete sidewalk along both sides of Bird street. In the short term provide HECW at Alaska St/Bird St.	

45	Waters Ave	Florida Ave	Nebraska Ave	Restripe with a 5 foot bike lane and a one 11 foot travel lane in each direction plus a 14 foot median. Consider a pedestrian median refuge island at Waters/Seminole. Remove concrete median EB at Nebraska to accommodate the bike lane.	114
	Waters Ave	Nebraska Ave	River Hills Dr	Install shared lane markings. Consider a HECW at 20th St	
46	113th Ave/47th St. (Greco Softball Complex)	Whiteway Dr	50th St	Construct sidewalk along east side of 47th St and south side of 113th Ave within the park. Construct HECW at 50th St/113th Ave and 47th/Whiteway Dr intersections.	116
47	Bruce B Downs Blvd	Fowler Ave	Pine Dr	Construct sidewalk along the east side. Use USF property and run sidewalk east of the existing berm and tie into exiting bus stop near NB RTL.	118
	Bruce B Downs Blvd	Pine Dr	Fletcher Ave	Construct sidewalk along the east side. Fill and/or retaining wall may be needed along a portion of the lake north of University Square Drive. Piping of the swale or a retaining structure with flumes may be necessary adjacent to the NB RTL at Holly Dr.	

Davis/Harbour Islands					
Seg/Node	On	From	To	Improvement 1	Page #
48	Severn Ave/Martinique Ave	Davis Island Yacht Club	S Davis Blvd	Install shared lane markings	120
	S Davis Blvd	Severn Roundabout	Hudson Ave	Install trail/sidepath connection from south side of the roundabout to the existing trail. Relocate crosswalk across Channel Dr closer to S Davis Blvd. Perform a parking utilization study. If on street parking is needed, restripe with 8/4/12/12 foot lane configuration. If not, restripe with a 4/15/15 foot lane configuration.	
	W Davis Blvd	Severn Roundabout	Biscayne Blvd	On bridge convert to a 6.5/11/11/6.5 foot lane configuration. For remainder of section convert to 8/4.5/10/10/4.5/8 foot lane configuration.	
	W Davis Blvd	Biscayne Blvd	Davis Blvd	Perform lane diet and add bike lanes, on street parking, and TWLTL.	
	E Davis Blvd	Hudson Ave	Chippewa Ave	Perform a parking utilization study to determine parking demand. If needed convert restripe with a 8/14.5/14.5/8 foot lane configuration. If not, restripe with a 5/11/13/11/5 foot lane configuration.	
	E Davis Blvd	Chippewa Ave	Chesapeake Ave	Perform a parking utilization study to determine parking demand. If needed convert restripe with a 8/14.5/14.5/8 foot lane configuration. If not, restripe with a 5/11/13/11/5 foot lane configuration.	
	E Davis Blvd	Chesapeake Ave	Barbados Ave	Install shared lane markings	
	E Davis Blvd	Barbados Ave	Davis Blvd	Restripe with 8 foot parking and a 14 foot travel lane with shared lane markings in each direction plus a 12 to 18 foot median.	
	Davis Blvd	E Davis Blvd/W Davis Blvd Sp	Davis Island Bridges	The City is currently studying this segment and will determine the recommendations. As an alternate corridor install shared lane markings on Columbia Drive from Davis Boulevard to Hudson Avenue.	
	Davis Island Bridge	Davis Islands	Mainland	Recommend a detailed review of a new bridge for pedestrian/bicycle traffic. See previous recommendations from Walk-Bike I.	
49	S Harbour Island Blvd/ Franklin St	Knights Run Ave	Convention Center/Greco Plaza	Install shared lane markings	126
50	Beneficial Dr	Knights Run Ave	Bridge	Install shared lane markings	127
	Beneficial Dr Bridge			Restripe with bike lanes	
	Beneficial Dr	Bridge	Channelside Dr	Install shared lane markings. Construct a ramp transition from the riverwalk onto SB Beneficial Dr for bicyclists. Reduce the NB LTL and inside NBT lane to provide a wider outside lane for shared lane markings at Beneficial Dr/Channelside Dr. In the long term eliminate the concrete separator and start a NB bike lane.	

Project Candidate 1 – Boundary Boulevard Corridor from Picnic Island Park to Interbay Boulevard



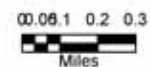
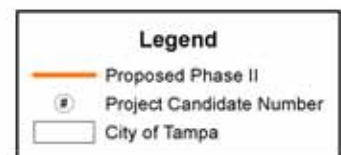
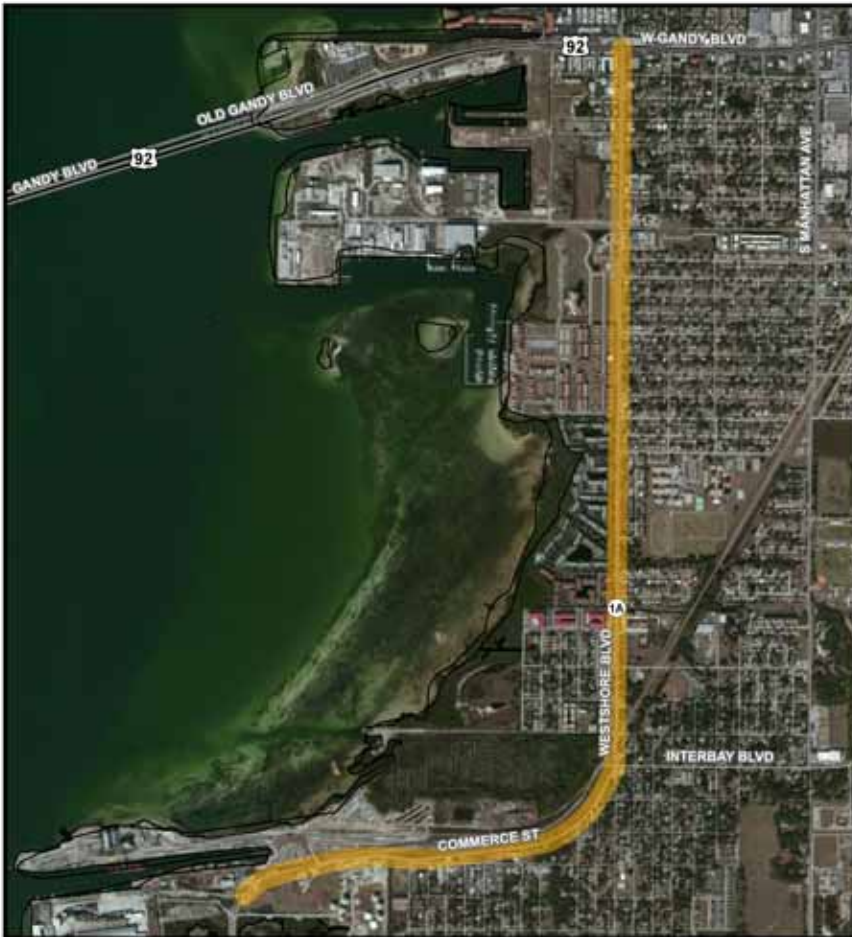
On	From	To	Section Type	SB/EB			Median/ TWLTL	NB/WB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
Boundary Blvd	Picnic Island	Interbay Blvd	2U	Rural	-	9	-	9	-	Rural

Table 1: Project Candidate 1 Cross Section

This is a proposed multi-use path corridor on the City’s Greenways and Trails plan. The proposed multi-use path would run adjacent to Manhattan Avenue from Interbay Boulevard to Richardson Avenue, then west and south on Richardson Avenue and Wall Street and connect to Boundary Avenue. The proposed corridor would then

follow Boundary Boulevard until it terminates. The proposed multi-use path would then follow an easement to Commerce Street. The multi-use path would then run adjacent to Commerce Street to Picnic Island Park. The segment along the easement from Boundary Boulevard to Commerce Street would proceed through Picnic Island Creek and would require fill and/or drainage improvements. The alternative route discussed, below, in project candidate 1A may provide a more cost feasible option in the short term.

Project Candidate 1A – Westshore Boulevard/Commerce Street from Gandy Boulevard to Picnic Island Park



On	From	To	Section Type	SB/EB			Median/TWLTL	NB/WB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
Commerce Boulevard	Picnic Island Park	Kissimmee St	2U	Rural	-	12	-	12	-	Rural
Commerce Boulevard	Kissimmee St	Interbay Blvd	2U	Urban	5	12	-	12	-	Rural
Westshore Blvd	Interbay Blvd	Dolphin Pointe Apartments Cir	3D	Urban	5	12	12	12	5	Urban
Westshore Blvd	Dolphin Pointe Apartments Cir	Gandy Blvd	3D	Rural	5	12	10-12	12	5	Rural

Table 1A: Project Candidate 1A Cross Section

Picnic Island Park to Interbay Boulevard/Commerce Street

The posted speed limit along Commerce Street is 30 mph. The Picnic Island Boulevard speed limit is 30 mph north of the railroad tracks and 15 mph south of the tracks. A ditch and railroad tracks exist parallel to Commerce Street. Port Tampa is north of Picnic Island Park with truck traffic using Commerce Street.

Install shared lane markings and share the road bicycle signs. Coordinate with future planned Picnic Island trail on the City's Greenways and Trails Master Plan.

Interbay Boulevard/Commerce Street to Dolphin Pointe Apartments Circle

Along this section, the approximate pavement width is 36-feet, 2 travel lanes and a two way left turn lane (TWLTL), with curb and gutter. There is not sufficient right-of-way (ROW) to widen for bike lanes. The speed limit is 30 mph on Commerce Street south of Interbay Boulevard. Commerce Street becomes Westshore Boulevard at Interbay. From Interbay Boulevard to Dolphin Pointe Apartments Circle, the posted speed limit is 40 mph. An analysis should be performed to determine the viability of decreasing the posted speed limit to 35 mph from Interbay Boulevard to Dolphin Pointe Apartments Circle. Should the speed limit be reduced, the entire segment would meet the recommended speed requirement of the Manual on Uniform Traffic Control Devices (MUTCD) for the installation of shared lane markings.

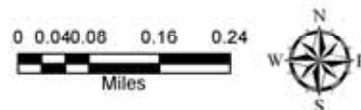
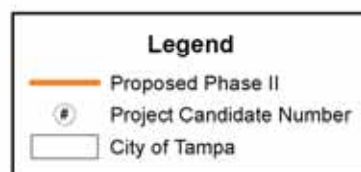
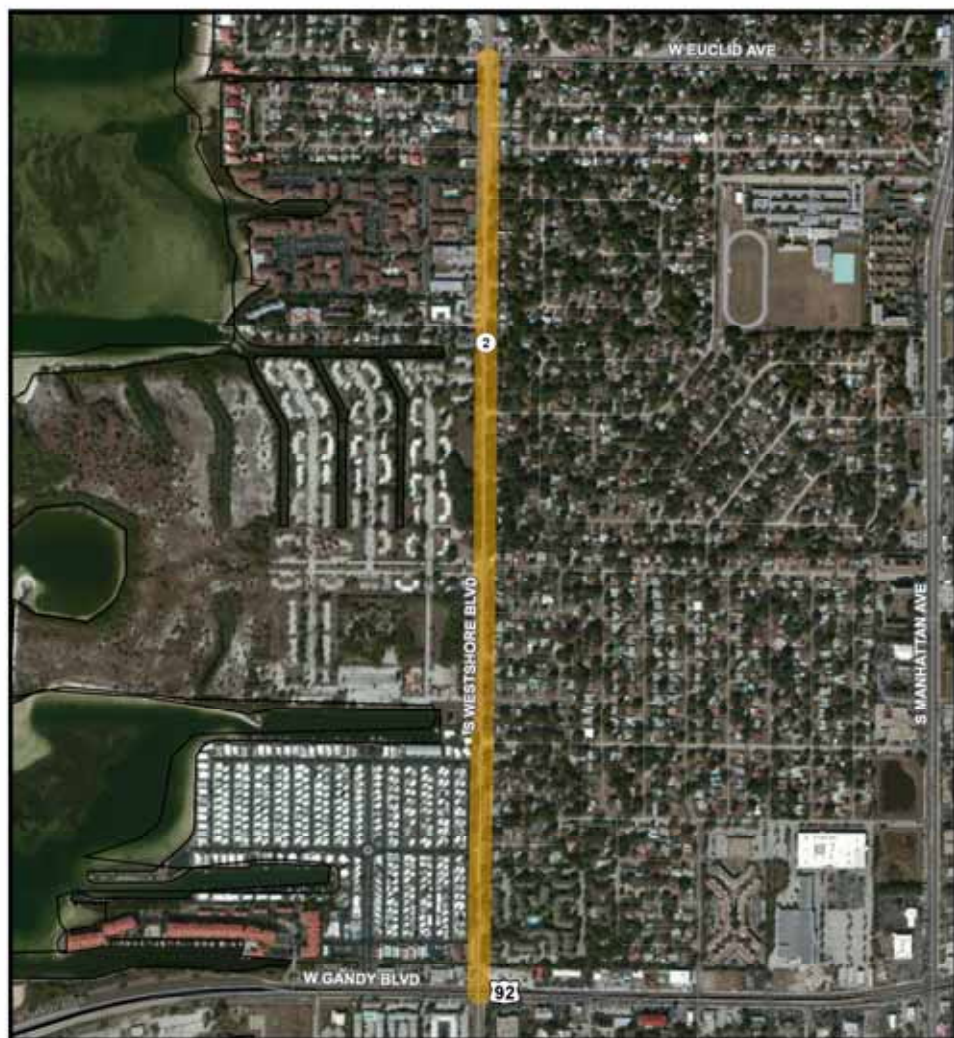
At the intersection of Westshore Boulevard and Interbay Boulevard, install high emphasis crosswalk markings (HECW).

Dolphin Pointe Apartments Circle to Gandy Boulevard

On Westshore Boulevard for this section, the posted speed limit is 45 mph. This segment has pavement widths of approximately 34-40-feet (2 travel lanes, a TWLTL, and portions with 3-4-foot paved shoulders). Intermittent median islands exist throughout the segment.

The 45 mph speed limit is not suitable for installation of shared lane markings. Reduction of the posted speed to 35 mph could allow for shared lane marking installation. Recent installation of isolated median islands eliminates the possibility of bike lanes, as the pavement width in each direction is 11-feet in the vicinity of the islands. In the short term, reduce the speed limit to 35 mph and install shared lane markings or at a minimum, install "Share the Road" signage. For the long term consider reworking the section to accommodate bike lanes.

Project Candidate 2 – Westshore Boulevard from Gandy Boulevard to Euclid Avenue



On	From	To	Section Type	SB			Median/ TWLTL	NB Travel Lane		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
Westshore Blvd	Gandy Blvd	Euclid Ave	2U	Rural	-	12	-	12	5	Rural

Table 2: Project Candidate 2 Cross Section

The posted speed limit of this 2-lane undivided roadway segment is 35 mph. The adjacent land uses are primarily residential with commercial uses near the intersections with Euclid Avenue and Gandy Boulevard. Adequate ROW exists on both sides of Westshore Boulevard for construction of a multi-use path. The west side

is preferred as there are fewer trees and fewer residential driveways than the east side. Drainage modifications to inlets at intersections may be needed. Piping of the swale on the west side of Westshore between Bay Villa Avenue and Bay Vista Avenue may be needed. The pedestrian bridge over the canal south of Euclid Avenue could also be widened or the canal filled in for a crossing. Further review of this aspect of the design is necessary. Figure 2 shows a sketch of the proposed improvements.

With redevelopment of the Georgetown Apartments site, it is anticipated that Westshore Boulevard will be widened to accommodate turn lanes. With this project, bike lanes or the multi-use path should also be considered.

Other Considerations

Along the west side of Westshore Boulevard, there are occasional trees within the right-of-way. A cursory review indicates that the path could avoid these trees, or result in relocations, if necessary. In particular, it is felt that the grand oak trees can and will remain in place. This should be carefully reviewed at engineering.

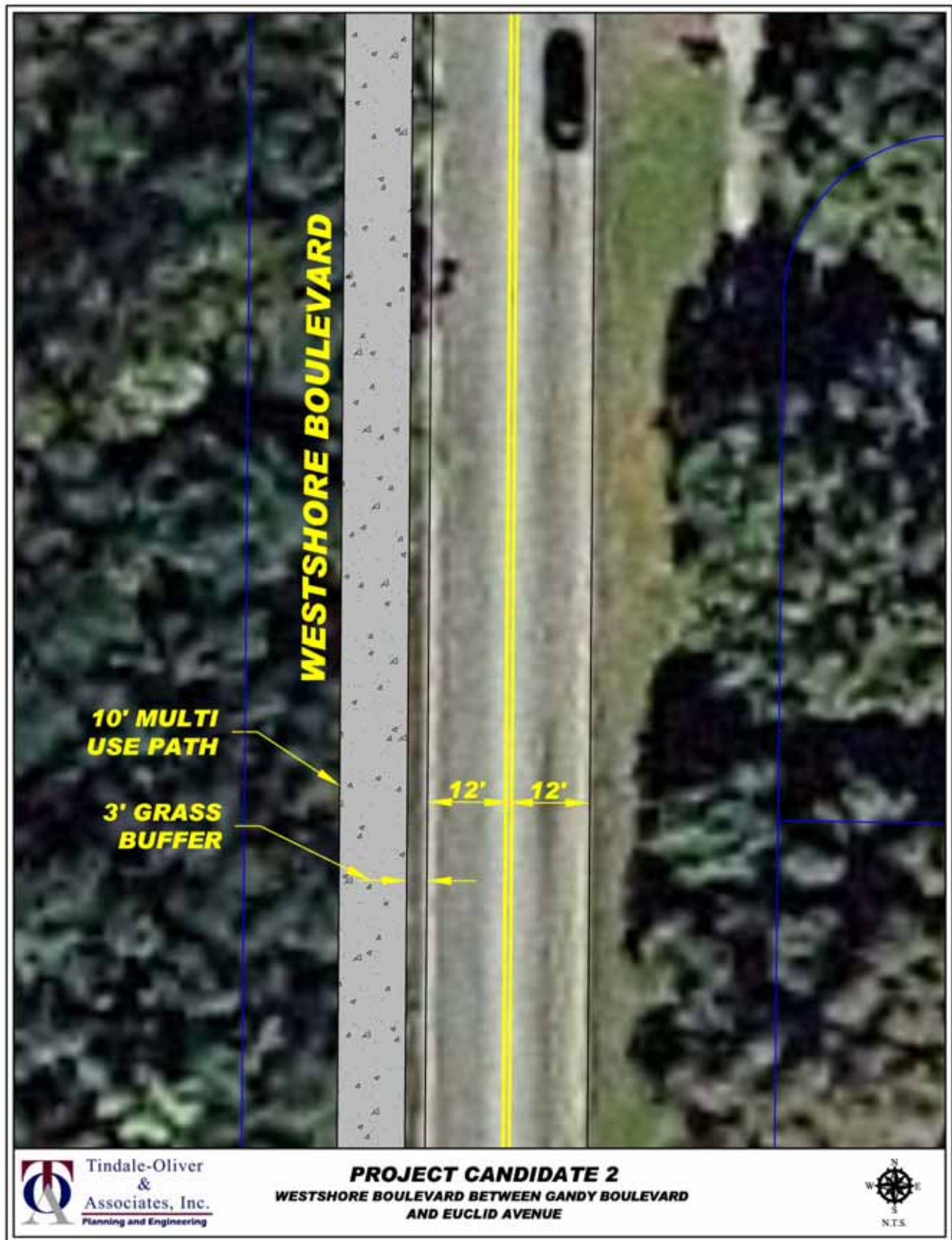
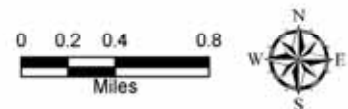
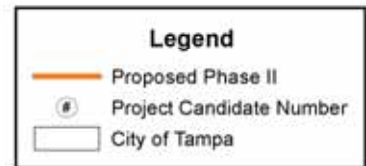
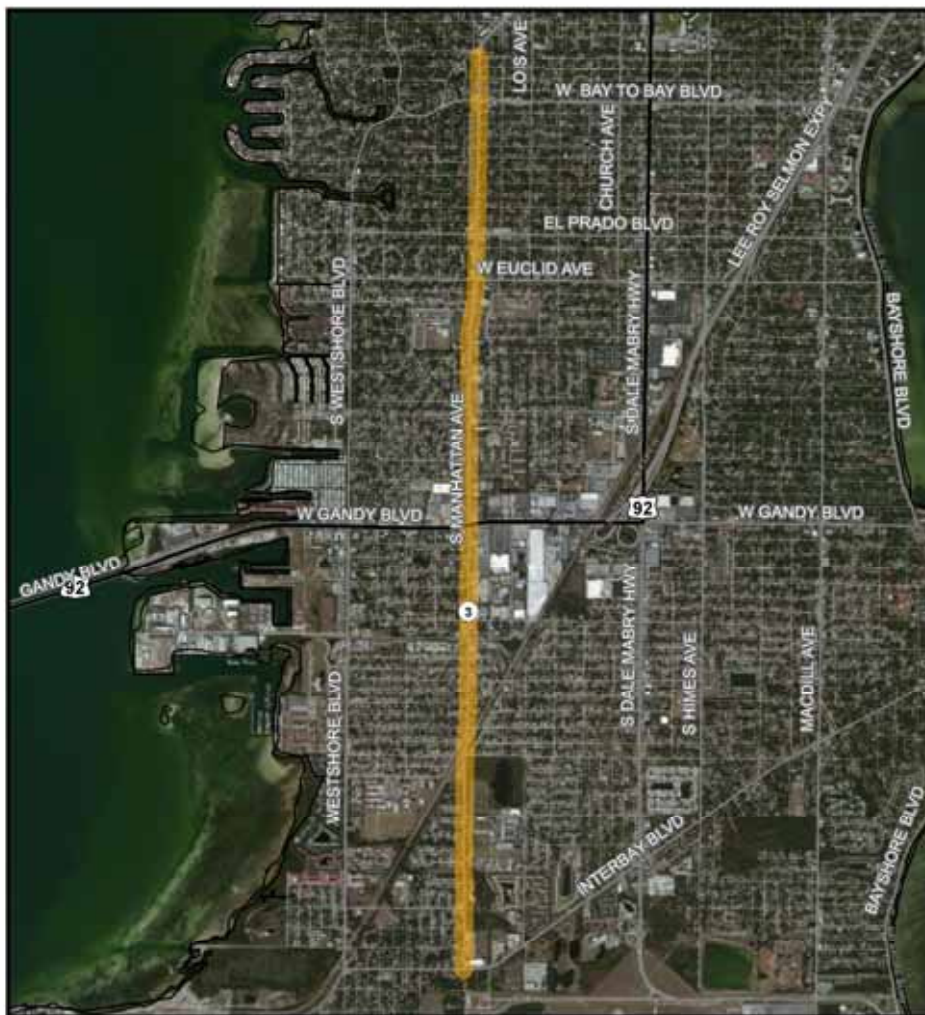


Figure 2: Westshore Blvd Multi-use path from Gandy Blvd to Euclid Ave

Project Candidate 3 – Manhattan Avenue from MacDill AFB to Henderson Boulevard



On	From	To	Section Type	SB					Median/ TWLTL	NB				
				Drainage Type	Sidewalk/ Multi-use Path	Bike Lane	Outside Lane	Inside Lane		Inside Lane	Outside Lane	Bike Lane	Sidewalk/ Multi-use Path	Drainage Type
Manhattan Ave	Interbay Blvd	W Bay Ave	2U	Rural	5	-	12	-	-	-	12	-	12	Rural
Manhattan Ave	W Bay Ave	W Iowa Ave	2U	Rural	5	-	12	-	-	-	12	-	-	Rural
Manhattan Ave	W Iowa Ave	Legacy Park Dr	2U	Rural	12	-	12	-	-	-	12	-	5	Rural
Manhattan Ave	Legacy Park Dr	Price Ave	2U	Rural	5	-	12	-	-	-	12	-	-	Rural
Manhattan Ave	Price Ave	Gandy Blvd	4D	Urban	6.5	-	9	9	Variable	9.5	9.5	-	-	Urban
Manhattan Ave	Gandy Blvd	El Prado Blvd	4D	Urban	5	5	11	11	17.5	11	11	5	7	Urban
Manhattan Ave	El Prado Blvd	Henderson Blvd	4D	Urban	5	-	11	11	13	11	11	-	5	Urban

Table 3: Project Candidate 3 Cross Section

Manhattan Avenue from MacDill AFB to Gandy Boulevard is a 2-lane undivided roadway with traffic signals at Interbay Boulevard and Gandy Boulevard. North of Gandy Boulevard to Henderson Boulevard, Manhattan Avenue is a 4-lane divided roadway. The speed limit is 35 mph south of Gandy Boulevard and 45 mph north of Gandy Boulevard.

Interbay Boulevard to W Bay Avenue

A multi-use path exists along the east side of Manhattan Avenue from Interbay Boulevard to W Bay Avenue. Just south of W Bay Avenue a marked crossing exists from the multi-use path on the east to a sidewalk on the west side of Manhattan Avenue. It is recommended that a HECW be installed on the east leg of the Manhattan Avenue/Interbay Boulevard intersection. In the southeast quadrant of this intersection, the City of Tampa owns the two parcels fronting Interbay Boulevard between Manhattan Avenue and Tanker Way. There is a plan developed for a fire station and a multi-use path on this property, through the two parcels, to Tanker Way. Establish a connection with this path and the path along Manhattan. Figure 3 illustrates this concept.

W Bay Avenue to W Iowa Avenue

A sidewalk runs along the west side of Manhattan Avenue from Bay Avenue to W Iowa Avenue. There is a railroad crossing for the sidewalk. This sidewalk should be widened/replaced with a 12-foot wide multi-use path and the rail crossing should be improved.

W Iowa Avenue to Legacy Park Drive

North of W Iowa Avenue to Legacy Park Drive a multi-use path exists on the west side

Legacy Park Drive to Price Avenue

The 5-foot sidewalk along the west side of Manhattan from Legacy Park Drive to Price Avenue should be replaced with a 12-foot multi-use path. The rail crossing just south of W Tyson Avenue should be improved. Minor drainage improvements may be needed to facilitate the construction of the multi-use path as a shallow swale and inlets exist near some intersections.

Price Avenue to Gandy Boulevard

From Price Avenue to Gandy Boulevard, the swale ends and curb and gutter picks up. In this section, from Price Avenue to McElroy Avenue, an adequate buffer exists between the back of curb and the sidewalk for continuation of the multi-use path. A marked crossing near McElroy Avenue and shared lane markings from McElroy Avenue to Gandy on both sides of Manhattan Avenue could facilitate the transition through the Gandy Boulevard intersection to the existing bike lanes on Manhattan Avenue north of Gandy Boulevard. Lane widths from McElroy Avenue to Gandy Boulevard are nine to nine and a half feet and there is not adequate ROW to facilitate a widening, thus bike lanes are not feasible.

For all new side street/multi-use path crossings, upgrade or install high emphasis crosswalk markings (HECW) markings.

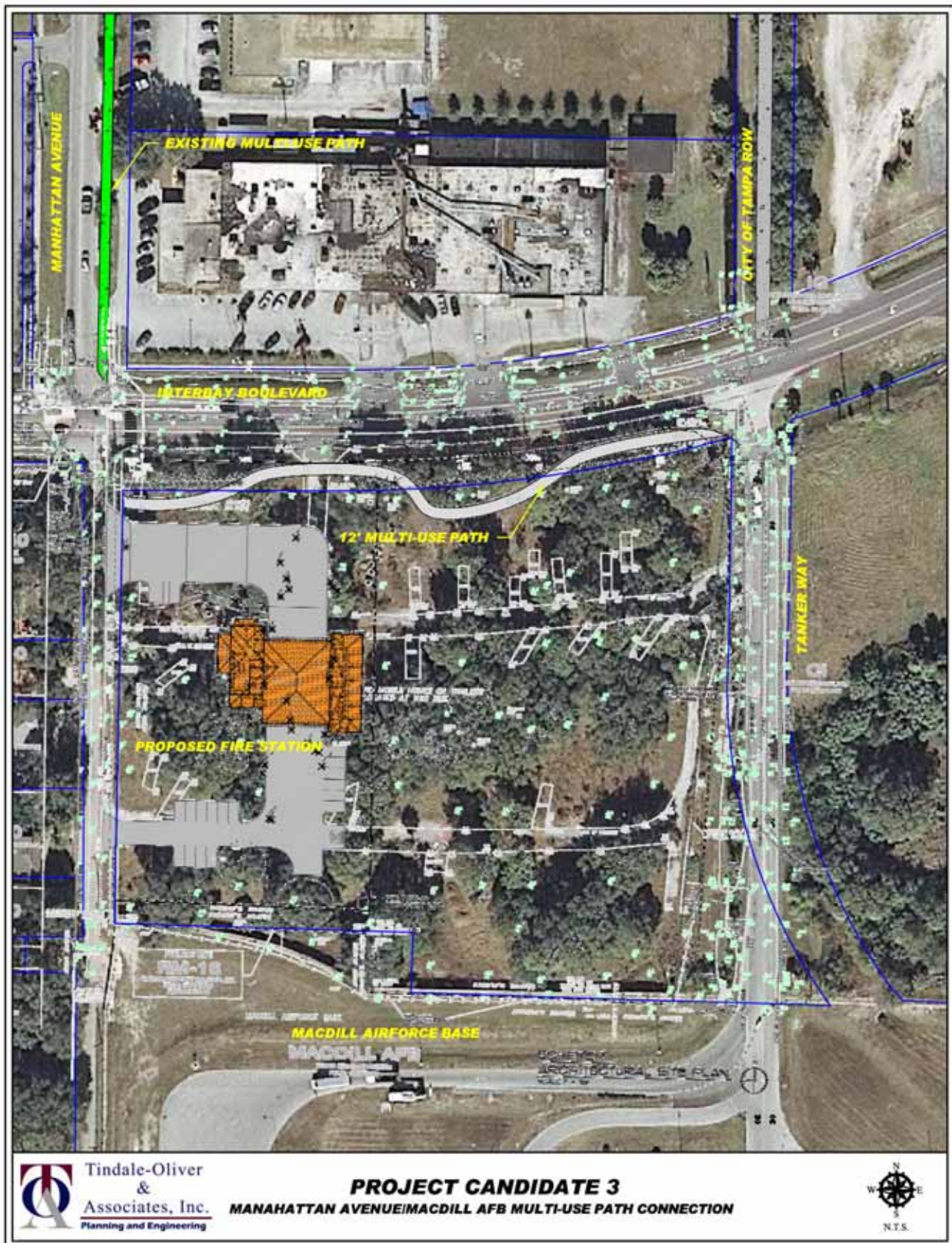


Figure 3A: Manhattan Ave Multi-use path Connection to MacDill Ave

Gandy Boulevard to Euclid Avenue

Manhattan Avenue from Gandy Boulevard to Euclid Avenue is a 5-lane section (4 lanes divided with a TWLTL) and an existing bike lane. Within this section, all pedestrian crossings should be upgraded to HECW. Note, there is an existing pedestrian signal south of W Fair Oaks Avenue.

Euclid Avenue to Henderson Boulevard

This section will provide a connection to both the shared lane treatments on Euclid Ave, and the potential future connection of El Prado Boulevard.

Based on field cross sections obtained, this section of Manhattan Avenue has an existing pavement width ranging from 56.3 to 56.7-feet. The gutter pan is 1.75-feet wide and the curb is 0.5-feet wide. The posted speed limit is 40 mph, 5 mph above the MUTCD suggested speed for shared lane markings. Widening is not desirable as there are trees and power poles between the back of curb and sidewalk on both sides of the roadway. The roadway could be restriped to a 3/10/10/10/10/3 foot lane width configuration, with 10-feet being the minimum American Association of State Highway and Transportation Officials (AASHTO) recommended lane widths for urban areas. Figure 3A illustrates this concept. This configuration will provide for 3-foot paved unmarked bike lanes. A secondary option would be to restripe the roadway to 13/10/10/10/13 foot lane width configuration and provide "Share the Road" signage with the wide outside lanes. In conjunction with this, a detailed study should be undertaken to determine if 40 mph is the proper suggested speed limit. If the speed limit were reduced to 35 mph, the application of shared lane markings, in conjunction with the wide outside lanes, would be appropriate. In the absence of a speed limit reduction, Manhattan could be striped with 13' outside lanes and no shared lane markings. In this case, "Share the Road" signage may be appropriate.

Consideration should also be given by the City to the paving of the 1.75-foot gutter pan on each side and/or the use of Type A, D, E, or F curb. This could allow approximately 12-foot lanes with shared lane markings or approximately 10.5-foot lanes with designated 4-foot bike lanes.

At each end of this section, the appropriate "Share the Road" signage should be incorporated for northbound and southbound direction.

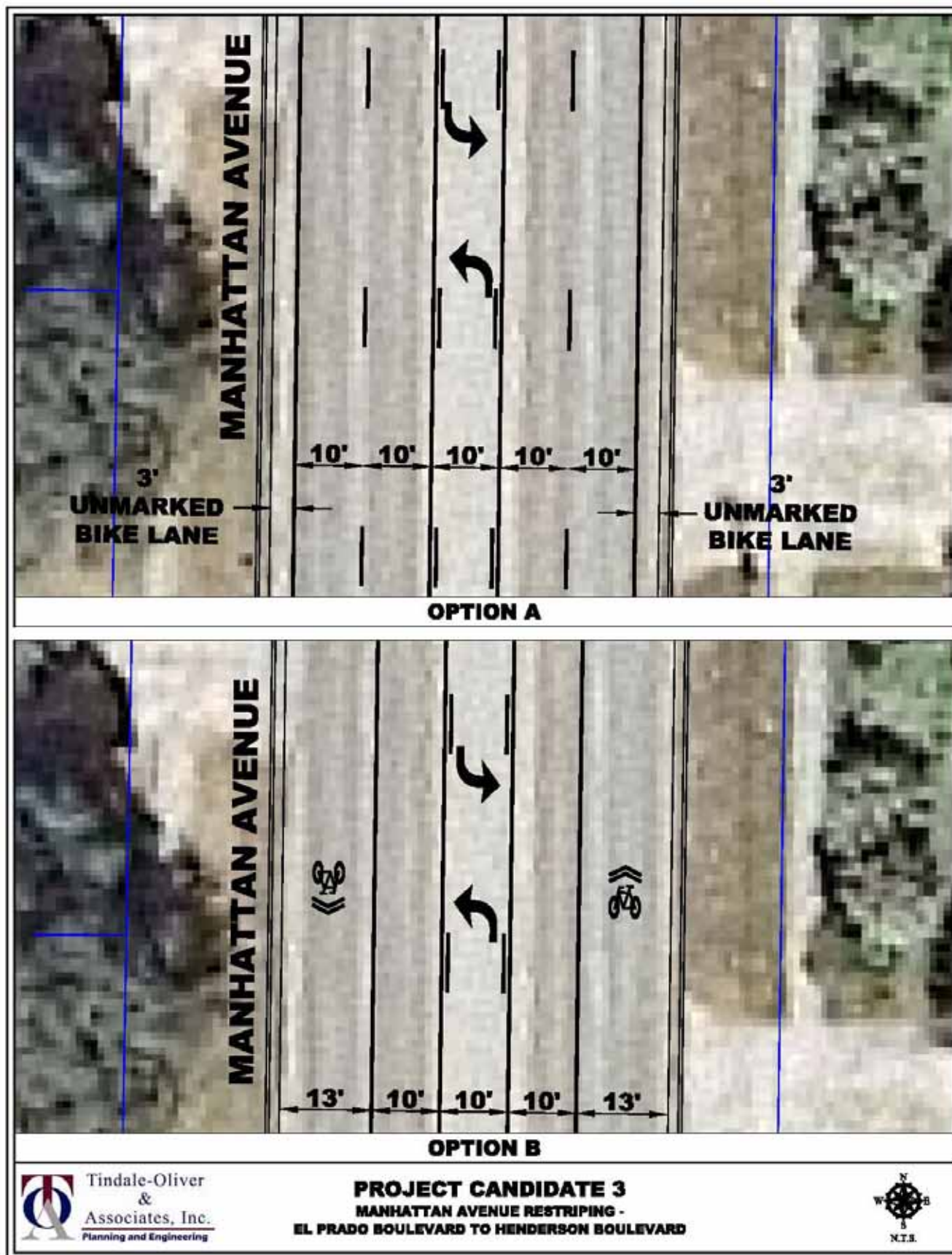


Figure 3B: Manhattan Ave Restriping - El Prado Blvd to Henderson Blvd

Throughout this segment, update and install truncated domes on ramps. Upgrade the crosswalks within the segment to HECW. A sidewalk gap exists on the southeast corner of the signalized intersection of Manhattan Avenue at Bay to Bay Boulevard. Pedestrian ramps, sidewalk, and pedestrian signals could be installed to facilitate more accessible crossing of the south and east legs of the intersection. This project should be considered with any upgrades to this traffic signal. Figures 3A and 3B illustrate the gaps.

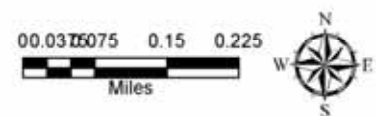
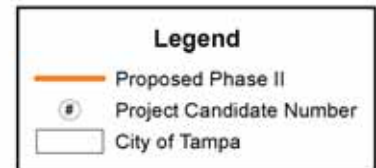


Figure 3C: Sidewalk gap crossing Bay to Bay Boulevard (looking north)



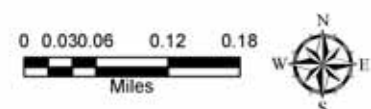
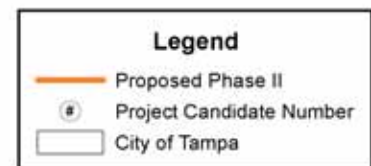
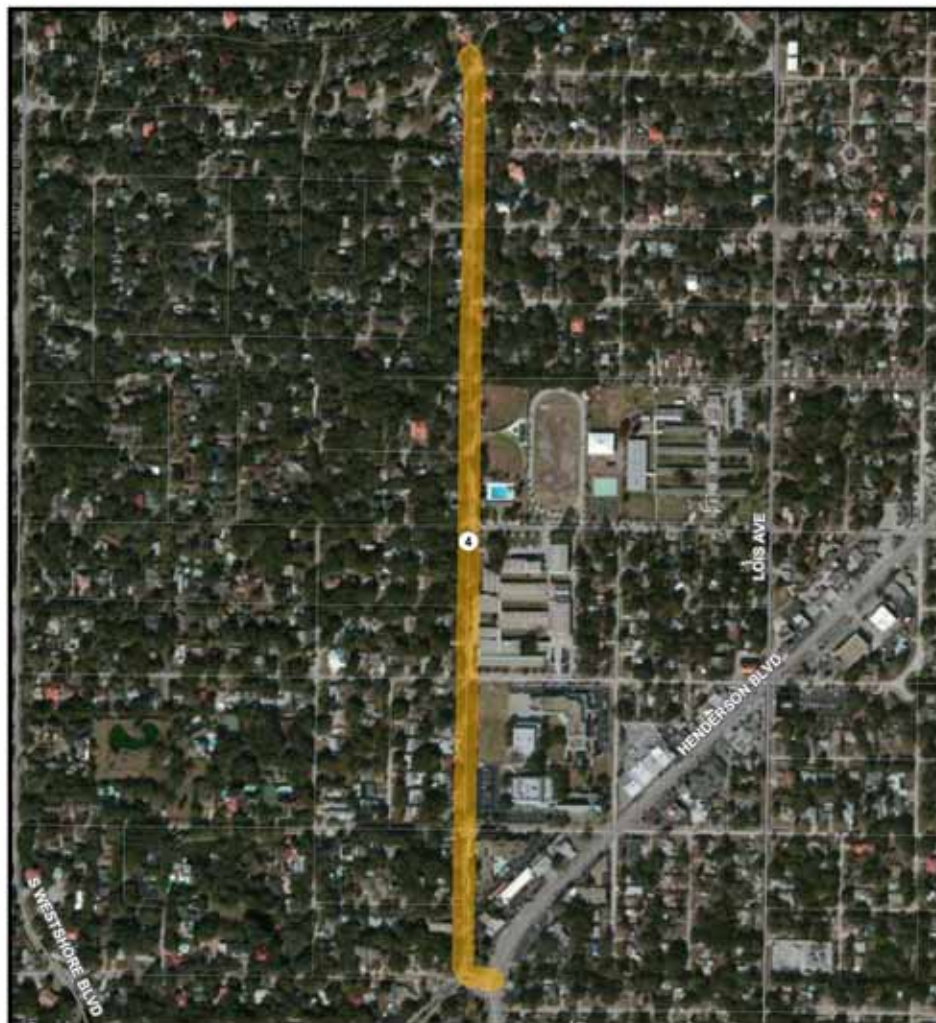
Figure 3D: Sidewalk gap crossing Manhattan Avenue (looking north)

**Project Candidate 3 (Alt) – Hesperides St./Sierra Cir./Schiller St./Henderson Blvd.
from Euclid Ave. to San Jose St.**



As a parallel corridor to Manhattan Avenue from El Prado to Henderson Boulevard, this corridor could be a substitute for that segment should that portion of Manhattan Avenue be found unfeasible. The corridor is mainly comprised of 2-lane undivided roads with total pavement widths of 20-25-feet. South of Bay to Bay Boulevard the speed limit is 25 mph. North of Bay to Bay Boulevard the speed limit is 30 mph. The corridor winds through residential neighborhoods to the east of Manhattan Avenue. Install shared lane markings and enhance crossings at El Prado Boulevard and Bay to Bay Boulevard.

Project Candidate 4 – Manhattan Avenue from San Jose Street to Morrison Avenue



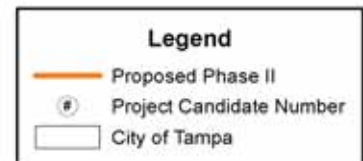
On	From	To	Section Type	SB			Median/ TWLTL	NB		
				Drainage Type	Sidewalk/ Multi-use Path	Travel Lane		Travel Lane	Sidewalk/ Multi-use Path	Drainage Type
Manhattan Ave	San Jose St	Morrison Ave	2U	Rural	-	11	-	11	5	Rural

Table 4: Project Candidate 4 Cross Section

Manhattan Avenue, from San Jose Street to Morrison Avenue, is a 2-lane undivided roadway with a posted speed limit of 25 mph. Coleman Middle School and Mabry School border the east side of Manhattan Avenue between San Rafael Street and Neptune Street. Angled on-street parking exists serving a pool and a park along the east side of Manhattan Avenue between Estrella Street and Neptune Street.

The recommendation is to install shared lane markings through this segment. The angled parking adjacent to the right side of Manhattan Avenue from Estrella Street to Neptune Street could be converted to parallel parking to provide better interaction between motorists and bicyclists. However, a detailed parking study would be required, as parallel parking would reduce the number of available spaces.

Project Candidate 5 – Henderson Boulevard from Manhattan Avenue to Kennedy Boulevard



On	From	To	Section Type	SB				Median/ TWLTL	NB			
				Drainage Type	Sidewalk/ Multi-use Path	Outside Lane	Inside Lane		Inside Lane	Outside Lane	Sidewalk/ Multi-use Path	Drainage Type
Henderson Blvd	Manhattan Ave	Kennedy Blvd	4U	Urban	-	10	10	-	10	10	5	Urban

Table 5A: Project Candidate 5 Cross Section

The typical section of Henderson Boulevard is a 4-lane undivided roadway with a total pavement width of 40-feet. The speed limit is 40 mph. There is limited ROW which could facilitate a widening for bike lanes. An alternative would be to investigate the potential to perform a road diet from Manhattan Avenue to Kennedy Boulevard. Table 5B shows the City's volume data for the segments affected.

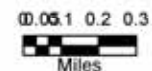
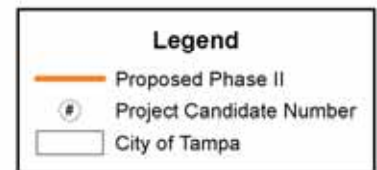
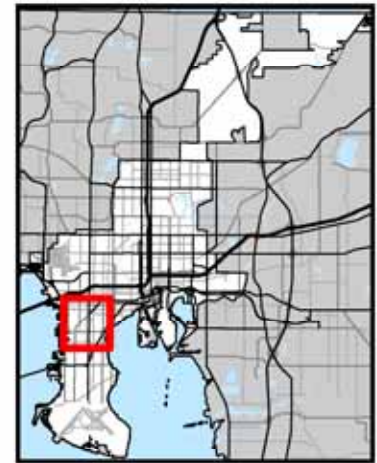
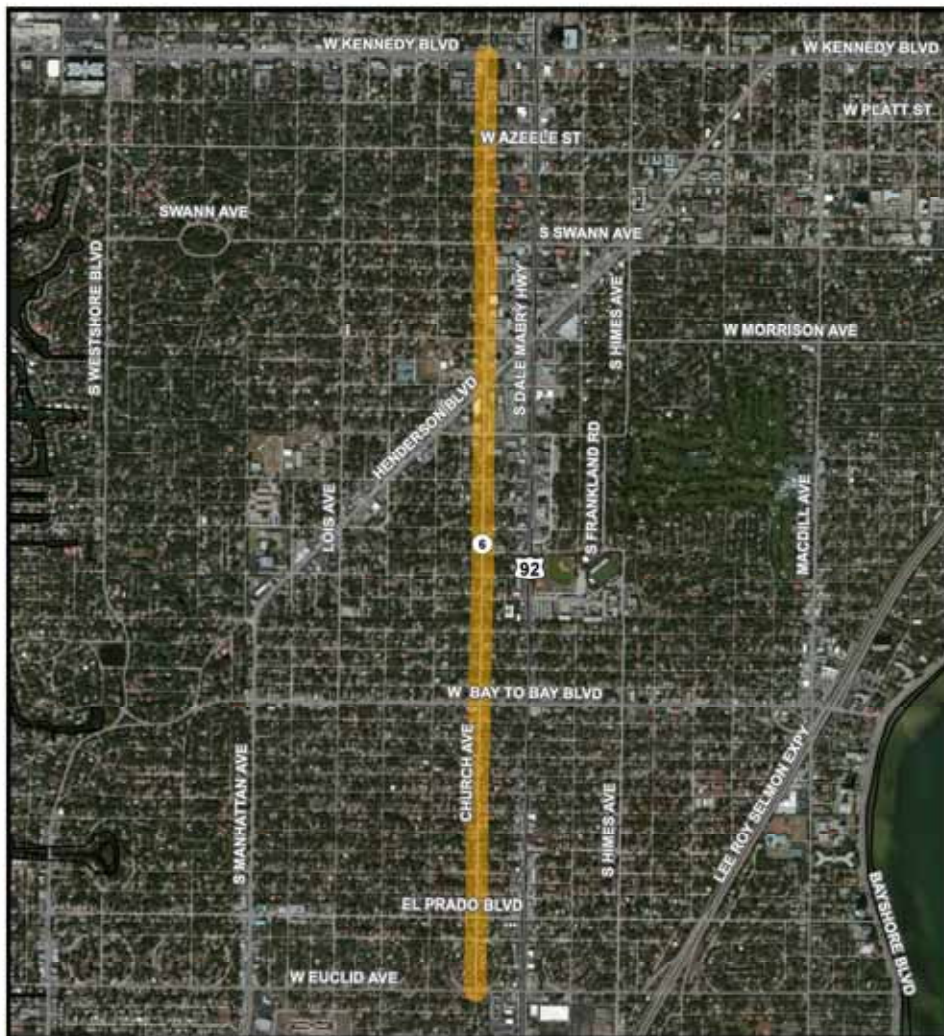
On	From - To	Maintenance Responsibility	Existing Road Type	Date of Count	Existing Daily Volume	AADT	Existing LOS D Capacity	Existing v/c	Existing LOS	Link Status
Henderson Blvd	Manhattan Ave(Church) to Dale Mabry Hwy	COUNTY	4LU	12/17/07	18332	17627	17891	0.99	D	CRITICAL
Henderson Blvd	Dale Mabry Hwy to Swann Ave	STATE	4LU	10/26/10	18813	19003	31540	0.60	B	NON-CRITICAL
Henderson Blvd	Swann Ave to Azeele St	STATE	4LU	10/26/10	18813	19003	31540	0.60	B	NON-CRITICAL

Table 5B: Henderson Boulevard Lane Diet Segment Traffic Data

The Annual Average Daily Traffic (AADT) volumes are borderline for the consideration of a road diet. A detailed study would be required to determine the feasibility of a lane diet project. This study should particularly consider if the middle two travel lanes are operating as de facto left turn lanes. Turning movement counts (TMCs) should be obtained for the major intersections (Manhattan Ave, Dale Mabry Hwy, Himes Ave, and Kennedy Ave). The study should determine the viability to convert this 4-lane undivided section into a 3-lane section (1 travel lane in each direction, and a two way left turn lane) with bike lanes.

There is a sidewalk gap of approximately 800' (portions are driveways) on the west side of Henderson Boulevard from approximately Swann Avenue to the vicinity of Horatio Avenue. Coordinate with property owners, if right of way is needed, to install sidewalk.

Project Candidate 6 – Church Avenue from Euclid Avenue to Kennedy Boulevard



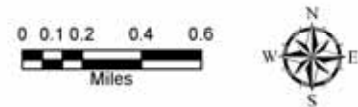
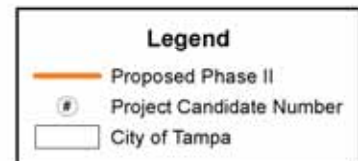
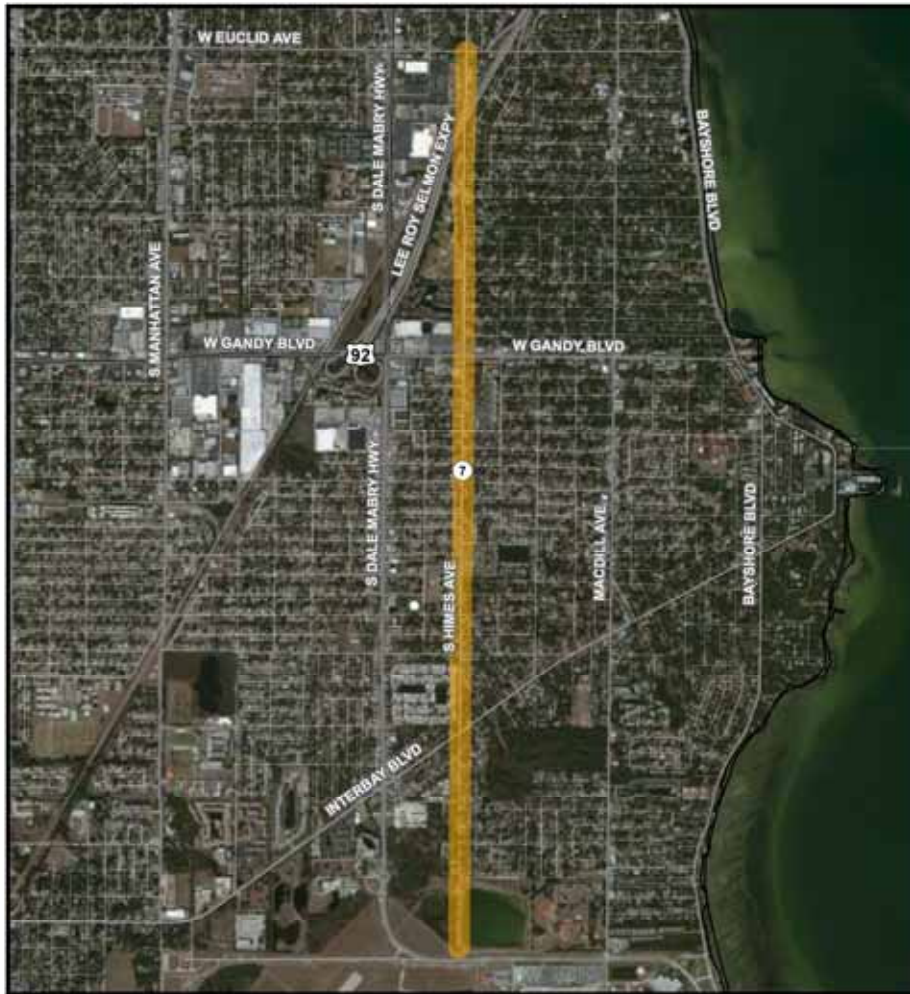
On	From	To	Section Type	SB			Median/ TWLTL	NB		
				Drainage Type	Sidewalk/ Multi-use Path	Travel Lane		Travel Lane	Sidewalk/ Multi-use Path	Drainage Type
Church Ave	Euclid Ave	Henderson Blvd	2U	Urban	5	13	-	13	-	Urban
Church Ave	Henderson Blvd	Swann Ave	2U	Rural	5	11	-	11	5	Rural
Church Ave	Swann Ave	Platt St	2U	Rural	5	10	-	10	5	Rural
Church Ave	Platt St	Kennedy Blvd	2U	Rural	-	10	-	10	-	Rural

Table 6: Project Candidate 6 Cross Section

Church Avenue is a 2-lane undivided roadway. The posted speed is 25 mph from Euclid Avenue to Henderson Boulevard, 30 mph from Henderson Boulevard to Swann Avenue, and 25 mph from Swann Avenue to Kennedy Boulevard. Lane widths range from 10-13-feet throughout the corridor.

Install shared lane markings along entire corridor. Install/upgrade pedestrian crossings to HECW at Swann Avenue, Henderson Boulevard, Bay to Bay Boulevard, El Prado Boulevard, and Euclid Avenue intersections.

Project Candidate 7 – Himes Avenue from Gadsden Park to Crosstown Expressway



On	From	To	Section Type	SB				Median/ TWLTL	NB			
				Drainage Type	Sidewalk/ Multi-use Path	Bike Lane	Travel Lane		Travel Lane	Bike Lane	Sidewalk/ Multi-use Path	Drainage Type
Himes Ave	Gadsden Park	Interbay Blvd	2U	Rural	5	-	10	-	10	-	-	Rural
Himes Ave	Interbay Blvd	Bay Ave	2U	Rural	-	-	10	-	10	-	5	Rural
Himes Ave	Bay Ave	Gandy Blvd	2U	Rural	5	-	12	-	12	-	-	Rural
Himes Ave	Gandy Blvd	Crosstown Expressway	2D	Urban	5	5	12	10	12	5	5	Urban

Table 7: Project Candidate 7 Cross Section

Gadsden Park to Gandy Boulevard

The speed limit is 25 mph from Gandy Boulevard to Interbay Boulevard and lane widths range from 10-12-feet. South of Interbay Boulevard the speed limit is 25 mph, speed bumps exist and lane widths are approximately 10-feet. Install shared lane markings along the segment. Install or upgrade to HECW along the entire corridor.

At Himes Avenue and Marcum St, reconstruct the sidewalk connecting to the Gadsden Park trail for a wider and straight connection. Use the Gadsden Park trail system as a connection to MacDill AFB. Add a connection from Gadsden Park trail to MacDill Avenue on the southeast corner of the park near the MacDill AFB gate and install bicycle signage to alert motorists to the presence of bicycles.

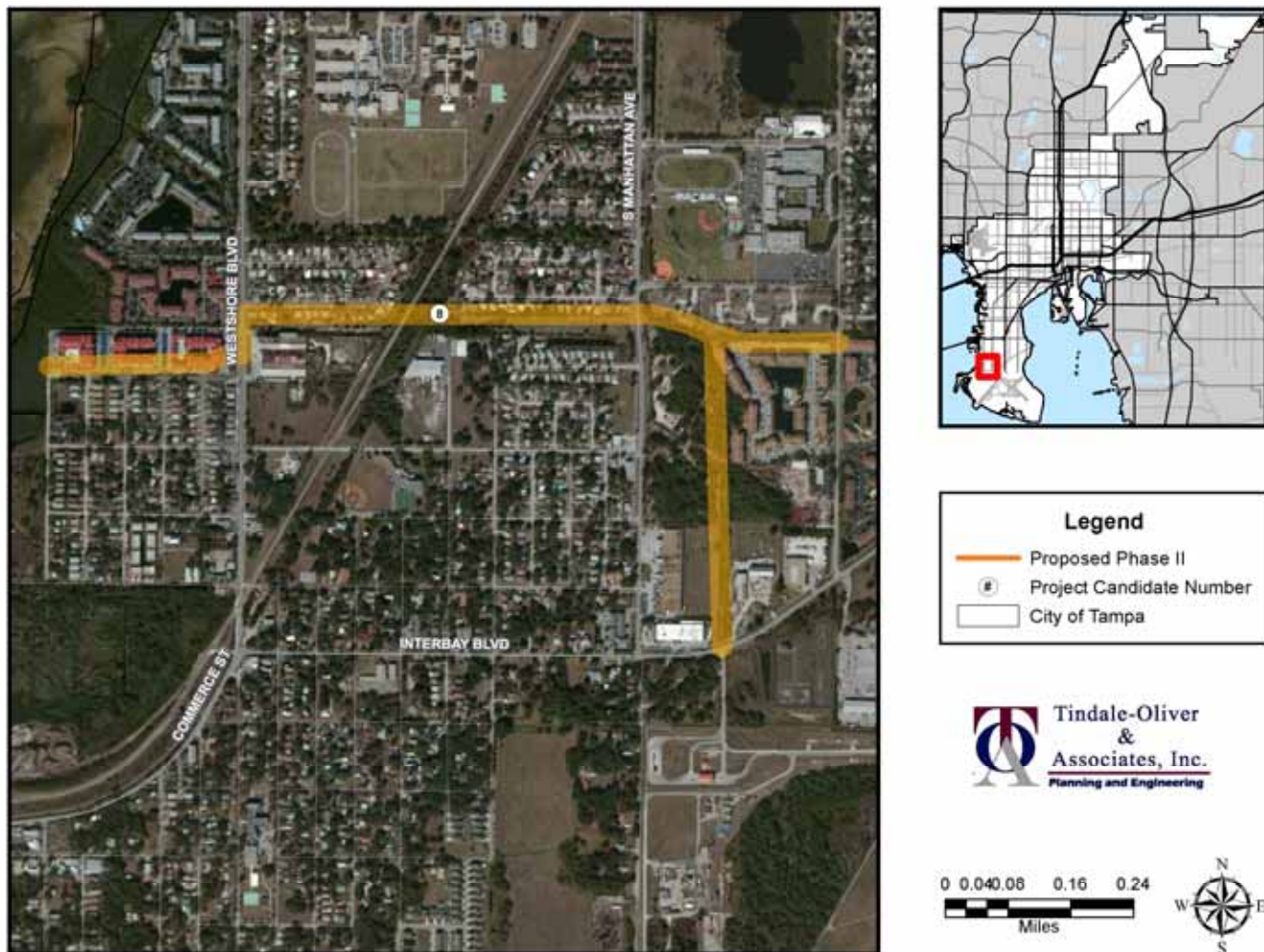
Gandy Boulevard to Crosstown Expressway

Bike lanes were recently installed. Upgrade to HECW at the Himes Avenue at Gandy Boulevard intersection.

Crosstown Expressway to Euclid Avenue

There is ample pavement width along this section. Maintain a 2-lane divided section and install bike lanes.

Project Candidate 8 – Everett Avenue Easement Corridor



The Everett Avenue Easement corridor was analyzed as it “parallels” the Interbay Boulevard corridor and satisfies a similar east-west connection in south Tampa. Interbay Boulevard bicycle/pedestrian improvements would require considerable improvements to the open drainage system that are likely to be costly. Additionally given the limited section, significant open drainage, and high truck volume, Interbay Boulevard is not an optimal east-west route for bicyclists and pedestrians on or adjacent to the roadway. Future Interbay Boulevard projects should consider incorporating bicycle/pedestrian improvements, particularly with any widening project.

Staunton Street from Sherrill Street to Westshore Boulevard

This segment has an existing 12-foot wide path within the residential neighborhood.

Westshore Boulevard from Staunton Street to Everett Avenue

The existing 12-foot wide path, discussed above, proceeds north at Westshore Boulevard, running along its west side, and terminates just south of Everett Avenue. This path should be continued north of Everett Avenue, where an enhanced crossing (RRFB) across Westshore Boulevard should be installed. The purpose of this extension and dedicated crossing is to provide a connection from the residential community, and existing shared use path, to the east-west corridor discussed below.

Easement along Everett Avenue from Westshore Boulevard to Manhattan Avenue

An easement exists along the continuation of Everett Avenue from Westshore Boulevard to Manhattan Avenue. Install a bicycle/pedestrian pathway, potentially with lighting, along this segment. The segment has a railroad crossing that would require crossing enhancements for the pathway. Figure 8A shows a concept sketch of a possible pathway along this easement.

The City of Tampa owns the parcel east of railroad tracks shown in Figure 8A. It was bought from the United States in 2003 through the National Park Service to be used perpetually for park or recreational uses. Further investigation needs to be done on the parcel west of tracks, as no records exist on the Hillsborough County Property Appraiser's website.

Easement along Everett Avenue from Manhattan Avenue to Lois Avenue

East of Manhattan Avenue and south of Rembrandt Drive is a Hillsborough County School Board parcel. The bicycle/pedestrian pathway could continue through this parcel along the canal if coordinated with the School Board.

Easement along Everett Avenue from Manhattan Avenue south to Tanker Way

Approximately 500-feet east of Manhattan Avenue, south of the canal, a City of Tampa easement begins along the east side of the park/wooded area that turns south and intersects Interbay Boulevard at Tanker Way. This easement is a potential off-road pathway to MacDill AFB, should the City choose to use it. Figures 8B and 8C show the School Board and Tanker Way connector easements.

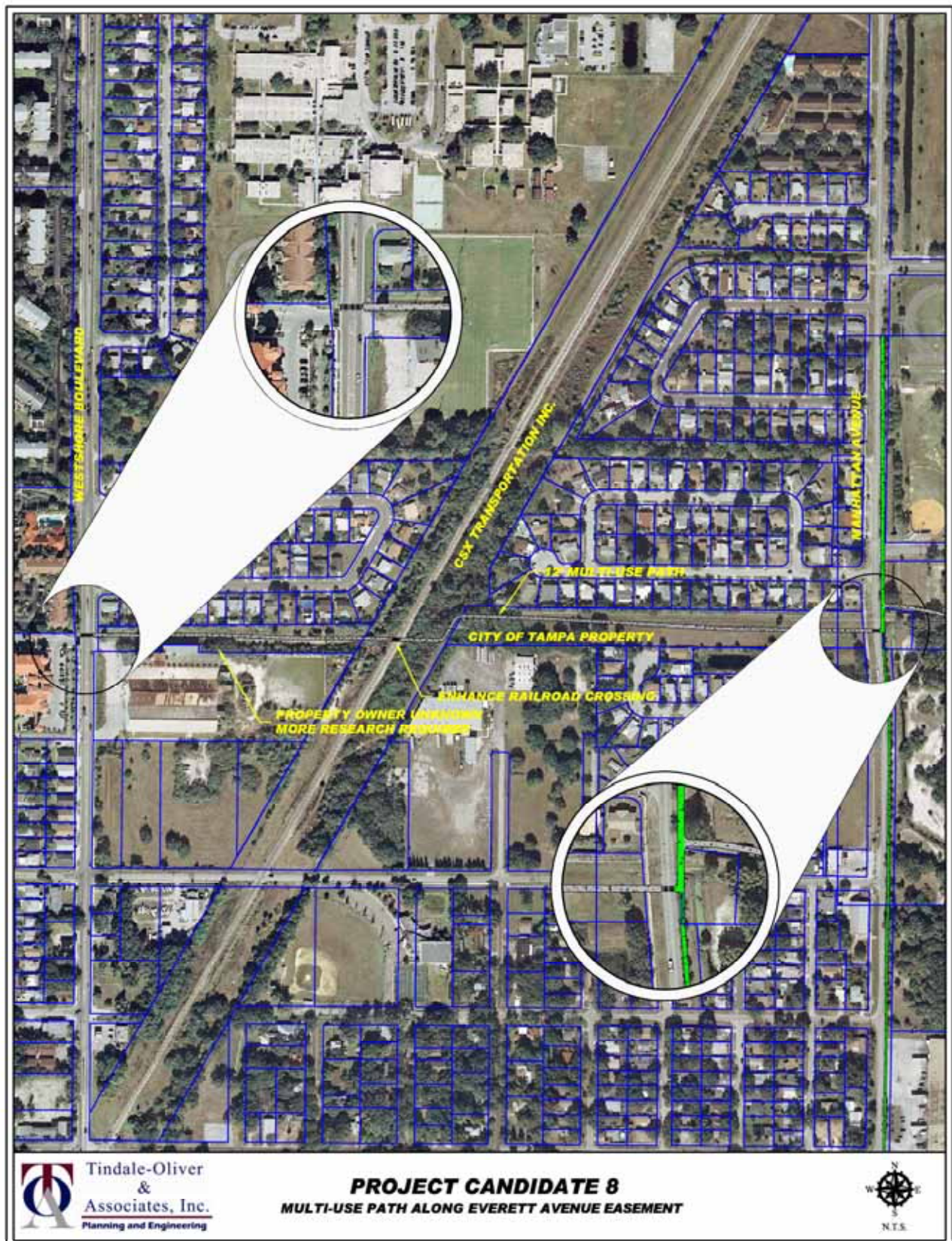


Figure 8A: Everett Avenue Easement – Bicycle/Pedestrian Pathway Concept

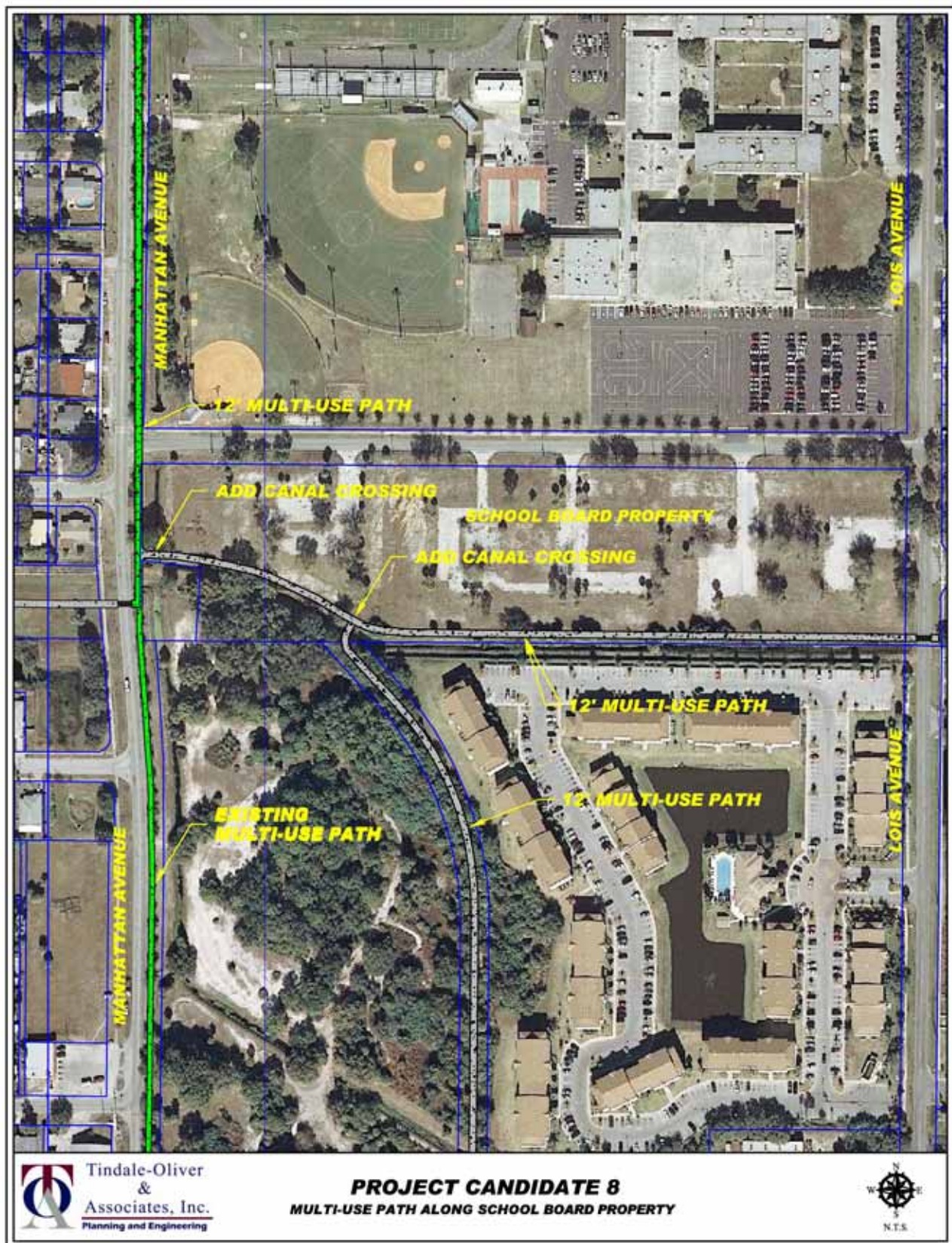


Figure 8B: School Board Parcel Bicycle/Pedestrian Pathway

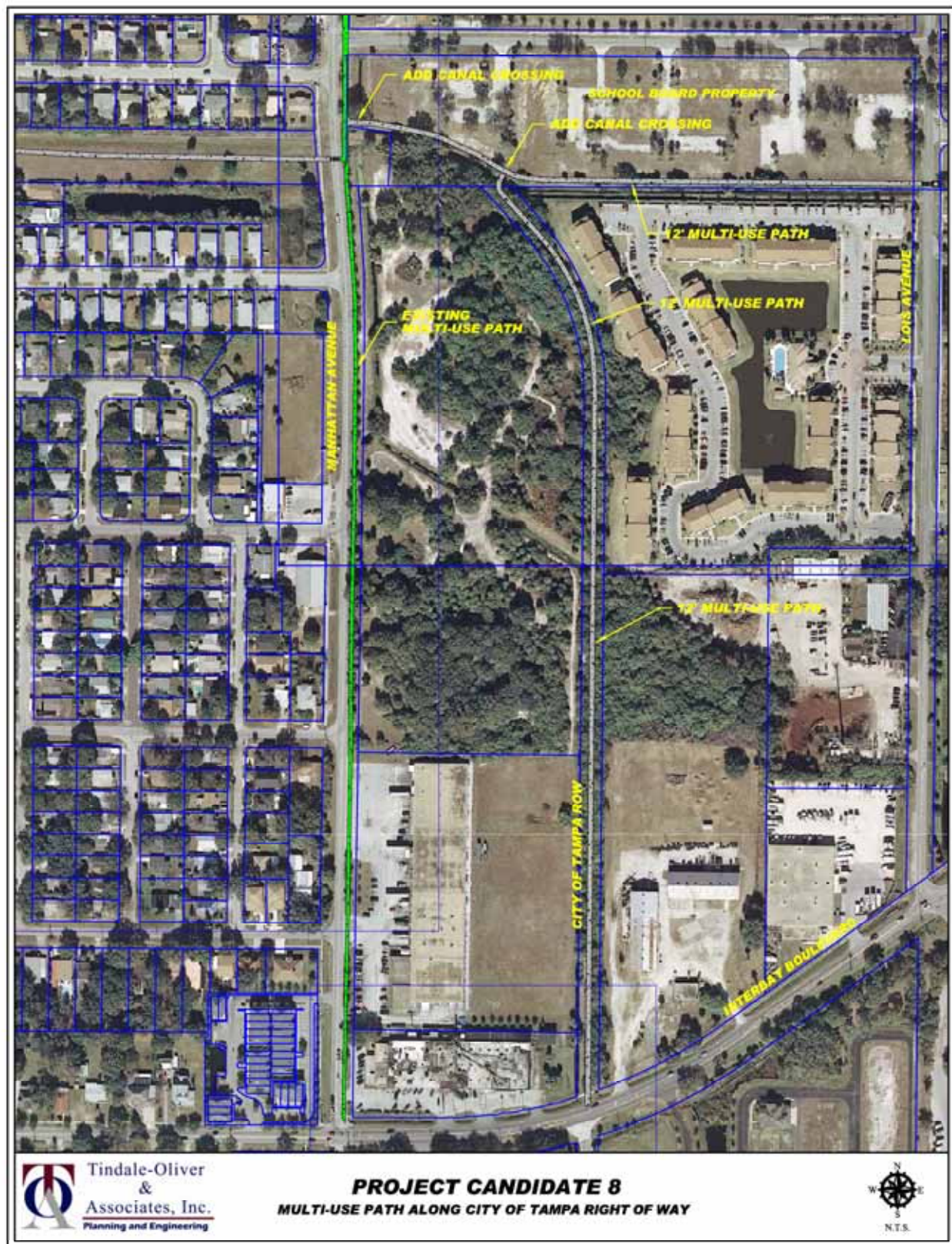
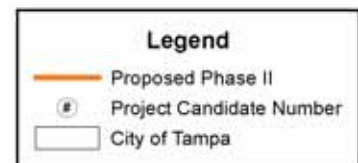
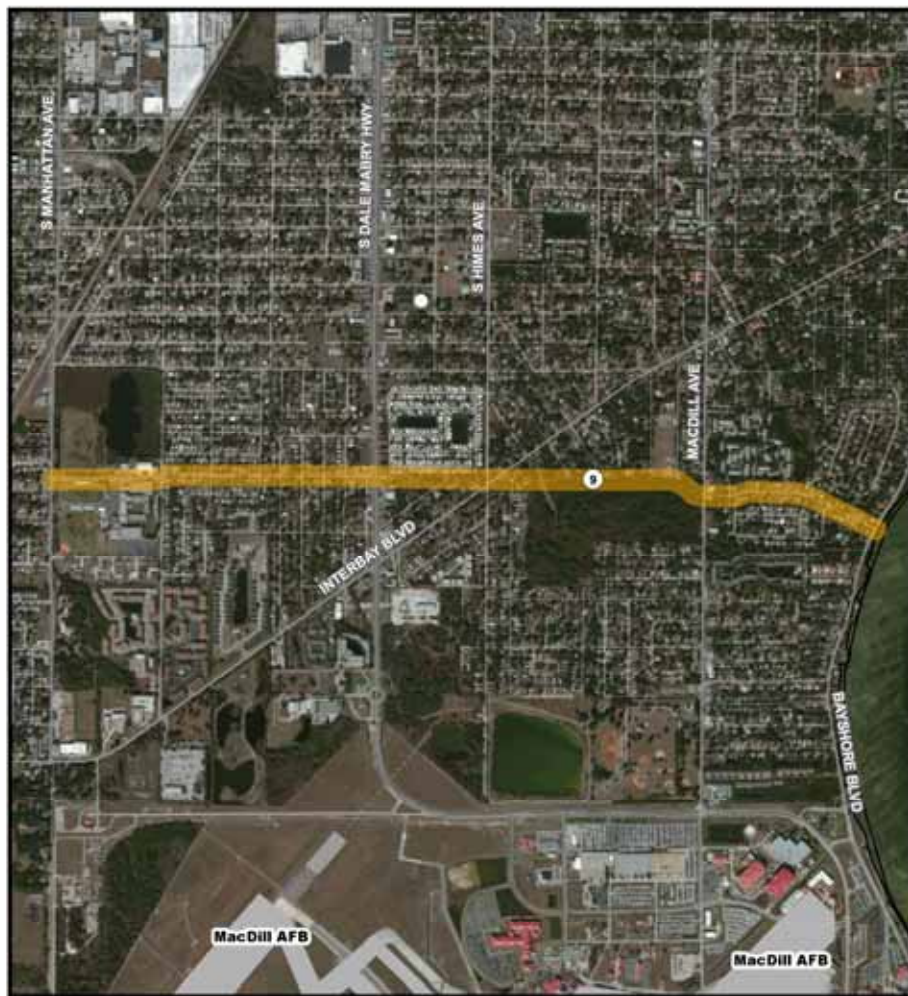


Figure 8C: City of Tampa ROW/Tanker Way Bicycle/Pedestrian Pathway

Project Candidate 9 – Mango Avenue Corridor



On	From	To	Section Type	EB			Median/ TWLTL	WB		
				Drainage Type	Sidewalk/ Multi-use Path	Travel Lane		Travel Lane	Sidewalk/ Multi-use Path	Drainage Type
Mango Ave	Manhattan Ave	Lois Ave	2U	Rural	5	12	-	12	5	Rural
Mango Ave	Lois Ave	Grady Ave	2U	Urban	5	11	-	11	-	Urban
Mango Ave	Grady Ave	Church Ave	2U	Rural	5	10	-	10	-	Rural
Mango Ave	Church Ave	Dale Mabry Hwy	2U	Rural	-	10	-	10	5	Rural
Mango Ave	Dale Mabry Hwy	End of Pavement	2U	Rural	5	9	-	9	-	Rural
Mango Ave Easement			N/A	Vacant						
Averill Ave	MacDill Ave	Bayshore Blvd	2U	Rural	-	10	-	10	-	Rural

Table 9: Project Candidate 9 Cross Section

Mango Avenue from Manhattan Avenue to Dale Mabry Highway

Install shared lane markings. Speed bumps exist. Install HECW and/or RRFB at Dale Mabry crossing.

Mango Avenue Easement from Dale Mabry Highway to MacDill Avenue

An approximately 42-feet wide segment of “unused” Mango Avenue ROW exists from Dale Mabry Highway east to the Himes Avenue/Interbay Boulevard intersection. Install a bicycle/pedestrian pathway. Enhance Interbay Boulevard/Himes Avenue intersection with HECW and RRFB. Make the Interbay Boulevard/Himes Avenue crossing and continue with a pathway on the north side of Mango Avenue. Mango Avenue then turns to the south; however, vacant ROW continues to the east towards a City owned park/conservation parcel. Continue pathway through vacant ROW and onto owned parcel. Connect to MacDill Avenue/Averill Avenue intersection. On site we talked to a resident who owns the property south of the vacant Mango ROW and claims to own the vacant Mango ROW. A detailed property research would need to be undertaken in the early planning stages for this corridor. All potentially impacted stakeholders will need to be closely coordinated with, including ELAPP and Parks. Figure 9 shows the proposed pathway.

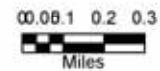
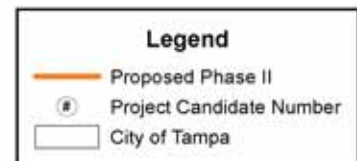
Averill Avenue from MacDill Avenue to Bayshore Boulevard.

From MacDill Avenue to Bayshore Boulevard, the posted speed limit is 25 mph. Install shared lane markings. At the MacDill Avenue/Averill Avenue intersection install HECW and/or RRFB. Additionally, install HECW at Averill Avenue/Bayshore Boulevard intersection. Install sidewalk along both sides of Averill Avenue.



Figure 9: Mango Avenue Multi-use Path

Project Candidate 10 – Oklahoma Avenue/Wyoming Avenue Corridor



On	From	To	Section Type	SB/WB			Median/ TWLTL	NB/EB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
Oklahoma Ave	Westshore Blvd	Railroad Tracks	2U	Urban	4	12	-	11	4	Urban
Oklahoma Ave	Railroad Tracks	Dale Mabry Hwy	2U	Urban	-	11	-	10	5	Rural
Oklahoma Ave	Dale Mabry Hwy	S. Sterling Ave	2U	Urban	4	11	-	10	5	Rural
Oklahoma Ave	S. Sterling Ave	Himes Ave	2U	Urban		11	-	10	-	Rural
Himes Ave	Oklahoma Ave	Wyoming Ave	2U	Rural	4	12	-	12	-	Rural
Wyoming Ave	Himes Ave	MacDill Ave	2U	Rural	-	10	-	10	5	Rural

Table 10: Project Candidate 10 Cross Section

Oklahoma Avenue from Westshore Boulevard to Himes Avenue

Within this segment, the posted speed limit is 25 mph. A railroad crossing exists west of Lois Avenue. Speed bumps exist between Church Avenue and Lois Avenue. The north leg of the Oklahoma Avenue at Dale Mabry Highway intersection has no crosswalk or pedestrian signals.

Install shared lane markings along entire segment. Install HECW at Manhattan Avenue, the west leg of Sterling Avenue, and Himes Avenue. Install HECW and pedestrian signals/pushbuttons on north leg of Dale Mabry Highway at Oklahoma Avenue.

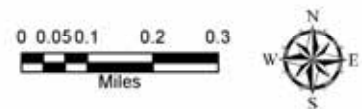
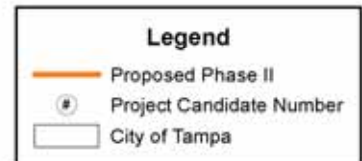
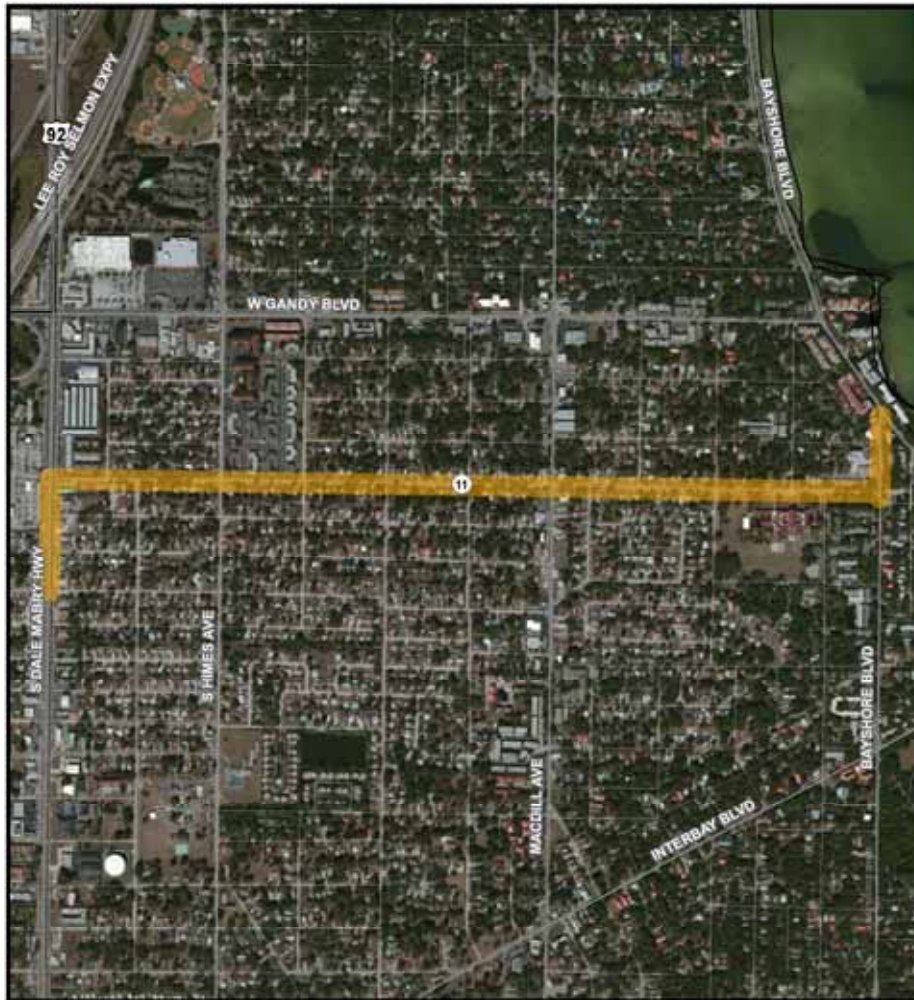
Himes Avenue from Oklahoma Avenue to Wyoming Avenue

The posted speed limit is 25 mph. Install HECW at the Oklahoma Avenue and Himes Avenue intersection. Approximately 6 – 10-feet exists from the edge of pavement to the ROW line on the east side of Himes Avenue where a multi-use path could be constructed. Tampa Electric Company owns the parcel to the east of Himes Avenue and an easement for a multi-use path could be possible with them. If a multi-use path is not possible, shared lane markings are proposed on Himes Avenue which would provide the north/south connection from the Oklahoma Avenue corridor to Wyoming Avenue.

Wyoming Avenue from Himes Avenue to MacDill Avenue

The posted speed limit is 25 mph. A deep swale exists immediately north of Wyoming Avenue from Himes Avenue to Sheridan Road. Install shared lane markings along the segment and HECW at MacDill Avenue.

Project Candidate 11 – Pearl Ave/Ballast Point Blvd from Westshore Boulevard to Interbay Blvd



On	From	To	Section Type	SB/WB					Median/ TWLTL	NB/EB				
				Drainage Type	Sidewalk	Bike Lane	Outside Lane	Inside Lane		Inside Lane	Outside Lane	Bike Lane	Sidewalk	Drainage Type
Pearl Ave	Westshore Blvd	Trask St	2U	Rural	-	-	10	-	-	-	10	-	-	Rural
Pearl Ave	Trask St	Manhattan Ave	2U	Rural	5	-	10	-	-	-	10	-	-	Rural
Pearl Ave	Manhattan Ave	Canal	2U	Rural	-	-	10	-	-	-	10	-	5	Rural
Pearl Ave	Canal	Dale Mabry Hwy	2U	Urban	5	-	11	-	-	-	11	-	-	Urban
Dale Mabry Hwy	Pearl Ave	Ballast Point Blvd	4D	Urban	5	4	11	10	29	9	11	4	5	Urban
Ballast Point Blvd	Dale Mabry Hwy	MacDill Ave	2U	Rural	-	-	10	-	-	-	10	-	5	Rural
Ballast Point Blvd	MacDill Ave	Quincy St	2U	Rural	5	-	10	-	-	-	10	-	5	Rural
Ballast Point Blvd	Quincy St	Bayshore Blvd	2U	Rural	-	-	10	-	-	-	10	-	5	Rural
Bayshore Blvd	Ballast Point Blvd	Lykes Court	2U	Rural	5	-	11	-	-	-	10	-	-	Rural
Bayshore Blvd	Lykes Court	Bayshore Blvd/Interbay Blvd	2U	Rural	5	-	11	-	-	-	11	-	5	Rural

Table 11: Project Candidate 11 Cross Section

Pearl Avenue Westshore Boulevard to Dale Mabry Highway

This segment provides an east/west connection and intersects Dale Mabry Highway which has existing north/south bike lanes. The posted speed limit on Pearl Avenue is 25 mph. Total pavement width of the 2-lane undivided roadway is approximately 20-22-feet. It is recommended to install shared lane markings through this section and to install HECW and RRFB at the Pearl Ave/Westshore Blvd intersection.

Dale Mabry Highway from Pearl Avenue to Ballast Point Boulevard

Bike Lanes exist along Dale Mabry Highway. Install HECW and RRFB at intersection of Pearl Avenue and Dale Mabry Highway.

Ballast Point Boulevard from Dale Mabry Highway to Bayshore Boulevard

Along this section, install shared lane markings. There is an existing pedestrian signal on MacDill Avenue, south of Ballast Point Boulevard. Relocate the pedestrian signal to the intersection.

Bayshore Boulevard from Ballast Point Boulevard to Bayshore Boulevard/Interbay Boulevard

Install multi-use path along west side of Bayshore Boulevard. Tie into the existing Interbay Boulevard/Bayshore Boulevard intersection crosswalk on the southwest corner. Upgrade the crossing to HECW markings.

ALTERNATE Project Candidate 11 – Tyson Avenue/Ballast Point Boulevard



As an alternate to the Pearl Avenue connection, consider the following:

Bridge Street from Gandy Boulevard to Tyson Avenue

Bridge Street terminates at McElroy Avenue. This segment is on the parks plan as a continuation of Bridge Street to Tyson Avenue.

Tyson Avenue from Bridge Street to Westshore Boulevard

This segment would tie into the future Bridge Street trail extension shown on the parks plan. Shared lane markings would designate the segment of Tyson Avenue from Bridge Street to Westshore Boulevard. Install HECW and RRFB at the Tyson Ave/Westshore Blvd intersection.

Tyson Avenue from Westshore Boulevard to Manhattan Avenue

This is vacant ROW that may have been intended for future extension of Tyson Avenue to Westshore Boulevard. This segment runs along a railroad and an adjacent canal. Construct a bicycle/pedestrian pathway.

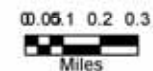
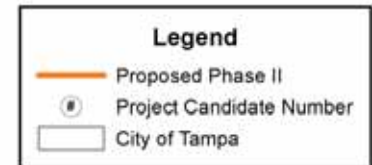
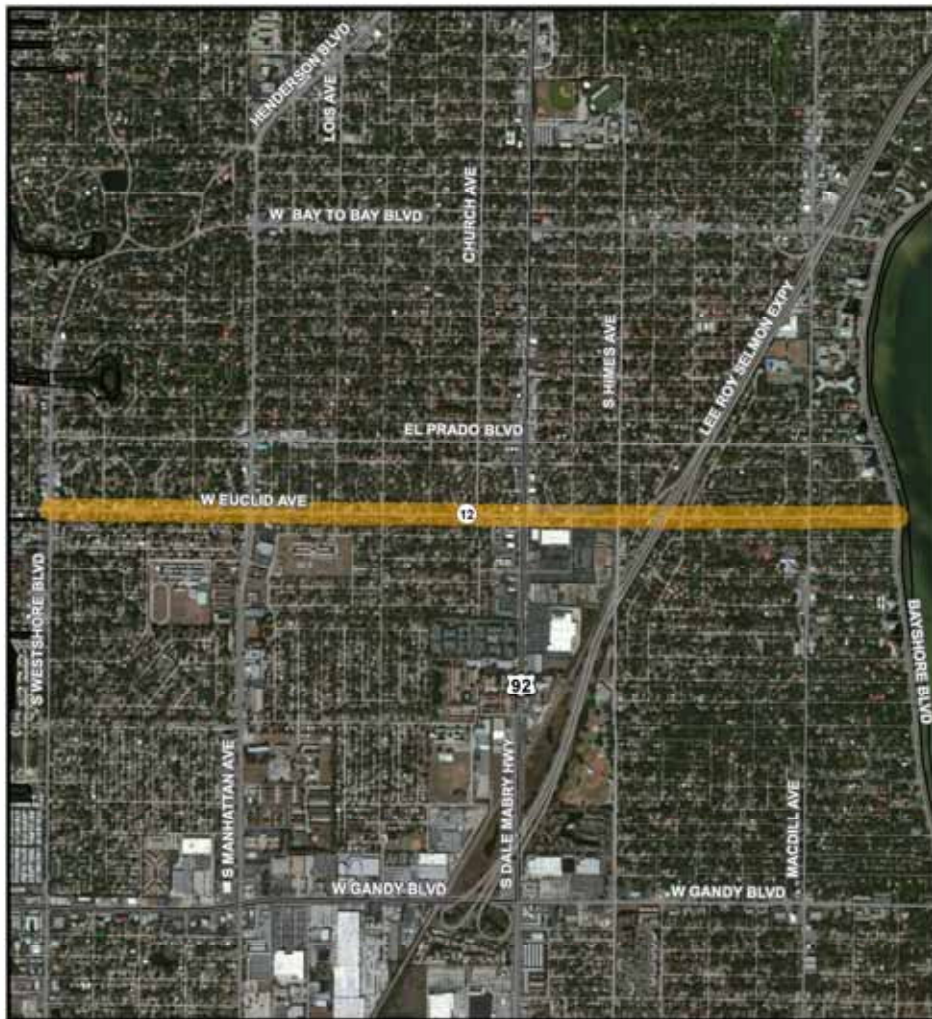
Tyson Avenue/Lois Avenue from Manhattan Avenue to Pearl Avenue

Install shared lane markings. Consider installing shared lane markings on Lois Avenue north to Gandy Boulevard as well.

Pearl Avenue from Lois Avenue to Dale Mabry Highway

Install shared lane markings.

Project Candidate 12 – Euclid Avenue from Westshore Boulevard to Bayshore Boulevard

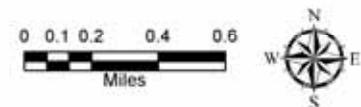
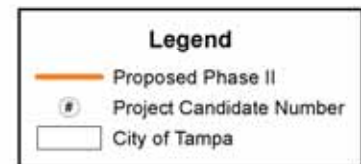
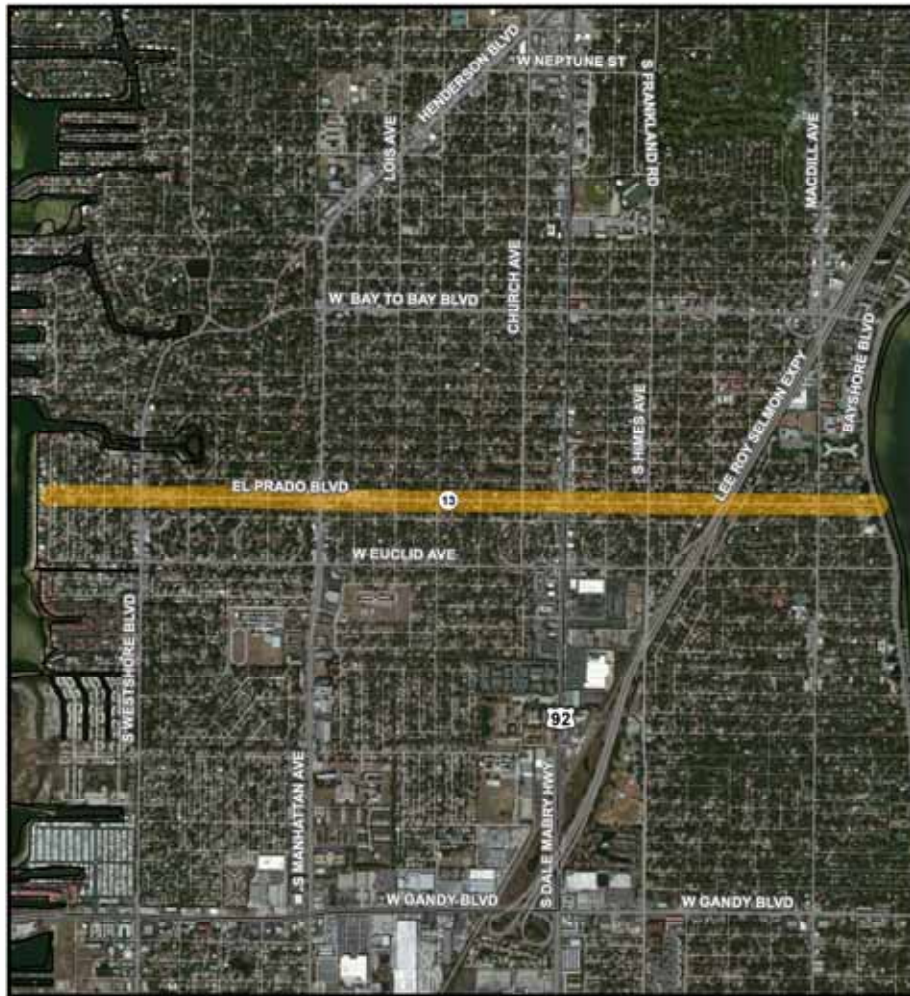


On	From	To	Section Type	WB			Median/ TWLTL	EB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
Euclid Ave	Westshore Blvd	Dale Mabry Hwy	2U	Urban	5	18	-	18	5	Urban
Euclid Ave	Dale Mabry Hwy	Himes Ave	2U	Urban	5	18	-	18	5	Urban
Euclid Ave	Himes Ave	MacDill Ave	2U	Urban	5	18	-	18	5	Urban
Euclid Ave	MacDill Ave	Bayshore Blvd	2U	Urban	5	18	-	18	5	Urban

Table 12: Project Candidate 12 Cross Section

The posted speed limit is 30 mph. Shared lane markings were recently installed on this segment and should be maintained.

Project Candidate 13 – El Prado Boulevard from Beach Drive to Bayshore Boulevard



On	From	To	Section Type	WB				Median/ TWLTL	EB				
				Drainage Type	Sidewalk	Outside Lane	Inside Lane		Inside Lane	Outside Lane	On Street Parking	Sidewalk	Drainage Type
El Prado Blvd	Beach Dr	Westshore Blvd	4D	Urban	5	9	9	12	9	9	-	5	Urban
El Prado Blvd	Westshore Blvd	S. Renellie Dr	4D	Urban	5	10	10	10	10	10	-	5	Urban
El Prado Blvd	S. Renellie Dr	Manhattan Ave	4D	Urban	-	10	10	10	10	10	-	5	Urban
El Prado Blvd	Manhattan Ave	Lois Ave	4D	Rural	-	20	10	10	10	20	-	5	Urban
El Prado Blvd	Lois Ave	MacDill Ave	4D	Urban	-	10	10	10	10	10	-	5	Urban
El Prado Blvd	MacDill Ave	Bayshore Blvd	2U	Urban	5	-	11	-	-	11	8	5	Urban

Table 13A: Project Candidate 13 Cross Section

El Prado Boulevard, particularly from Westshore Boulevard to MacDill Avenue, is a four-lane roadway that carries daily volumes approximately at 20-40% of capacity. Table 13B presents the AADT data for the studied segments. Given this level of traffic, El Prado appears to be a prime candidate for a lane diet project. As with most lane diets, a detailed analysis should be conducted to verify this assumption. Traffic counts and additional

study are needed to design the bike lane interaction at the major intersections and how the lane reduction would impact the capacity of the major intersections. Each section is discussed in further detail, below. It is recommended that the City coordinate with the neighboring community as soon as feasible to get a buy in and move forward.

In order to improve pedestrian safety, upgrade to HECW along the entire corridor, particularly at the Westshore Boulevard, Manhattan Avenue, and Dale Mabry Highway intersections.

On	From - To	Existing Road Type	Date of Count	Existing Daily Volume	AADT	Existing LOS D Capacity	Existing v/c	Existing LOS	Link Status
El Prado Blvd	Westshore Blvd to Manhattan Ave	5LU	03/26/08	4009	4176	23855	0.18	A	NON-CRITICAL
El Prado Blvd	Manhattan Ave to Dale Mabry Hwy	5LU	03/26/08	8573	8930	23855	0.37	A	NON-CRITICAL
El Prado Blvd	Dale Mabry Hwy to MacDill Ave	5LU	03/26/08	5345	5568	23855	0.23	A	NON-CRITICAL

Table 13B: El Prado Boulevard Lane Diet Segment Traffic Data

Beach Drive to Westshore Boulevard

From Beach Drive to Westshore Boulevard, the speed limit is 25 mph. Average pavement width is 18-feet in each direction (two-9-foot lanes). Perform a lane diet to convert the 4-lane divided section to a 2-lane divided section. Stripe each direction with a 12-foot travel lane and a 6-foot bike lane and stripe off the remaining pavement with chevrons. Figure 13A shows a sketch of this recommendation.

Westshore Boulevard to Manhattan Avenue

From Westshore Boulevard to Manhattan Avenue the speed limit is 35 mph. Average pavement width is 20-feet in each direction (two-10-foot lanes). Perform a lane diet to convert the 4-lane divided section to a 2-lane divided section, stripe each direction with a 12-foot travel lane and a 5-foot bike lane and stripe off the remaining pavement with chevrons. Figure 13B shows a sketch of this recommendation.

Manhattan Avenue to Lois Avenue

The Manhattan Avenue to Lois Avenue segment has a 30-foot pavement width in each direction. It appears that unmarked on-street parking is provided within the section. Restripe the eastbound direction to provide a 12-foot travel lane, a 5-foot bike lane, and 10-feet of marked on-street parking. Stripe off the remaining pavement in between the bike lane and on-street parking. In the westbound direction stripe the pavement with one 12-foot travel lane, a 5-foot bike lane, and the remainder of the pavement striped off. In lieu of striping out the remaining pavement, on-street parking could be maintained in the area noted for “stripe out”. Figure 13C shows the “striped out” recommendation.

Lois Avenue to MacDill Avenue

From Lois Avenue to MacDill Avenue the speed limit is 30 mph. Average pavement width is 20-feet in each direction (2-10-foot lanes). Consistent with the lane diet, convert the 20-foot pavement width in each direction

to a 12-foot travel lane, and a 5-foot bike lane. Stripe off the remaining pavement. Figure 13B shows this recommendation.

MacDill Avenue to Bayshore Boulevard

The speed limit within this segment is 30 mph. On-street parking exists. The roadway is brick with a 30-foot cross section (2-11-foot lanes and 8-foot parking). Install shared lane markings.

Construct a pedestrian crossing at Bayshore Boulevard with HECW and RRFB.



Figure 13A: El Prado Blvd Lane Diet – Beach Drive to Westshore Blvd



Figure 13B: El Prado Blvd Lane Diet –Westshore Blvd to Manhattan Ave and Lois Ave to MacDill Ave

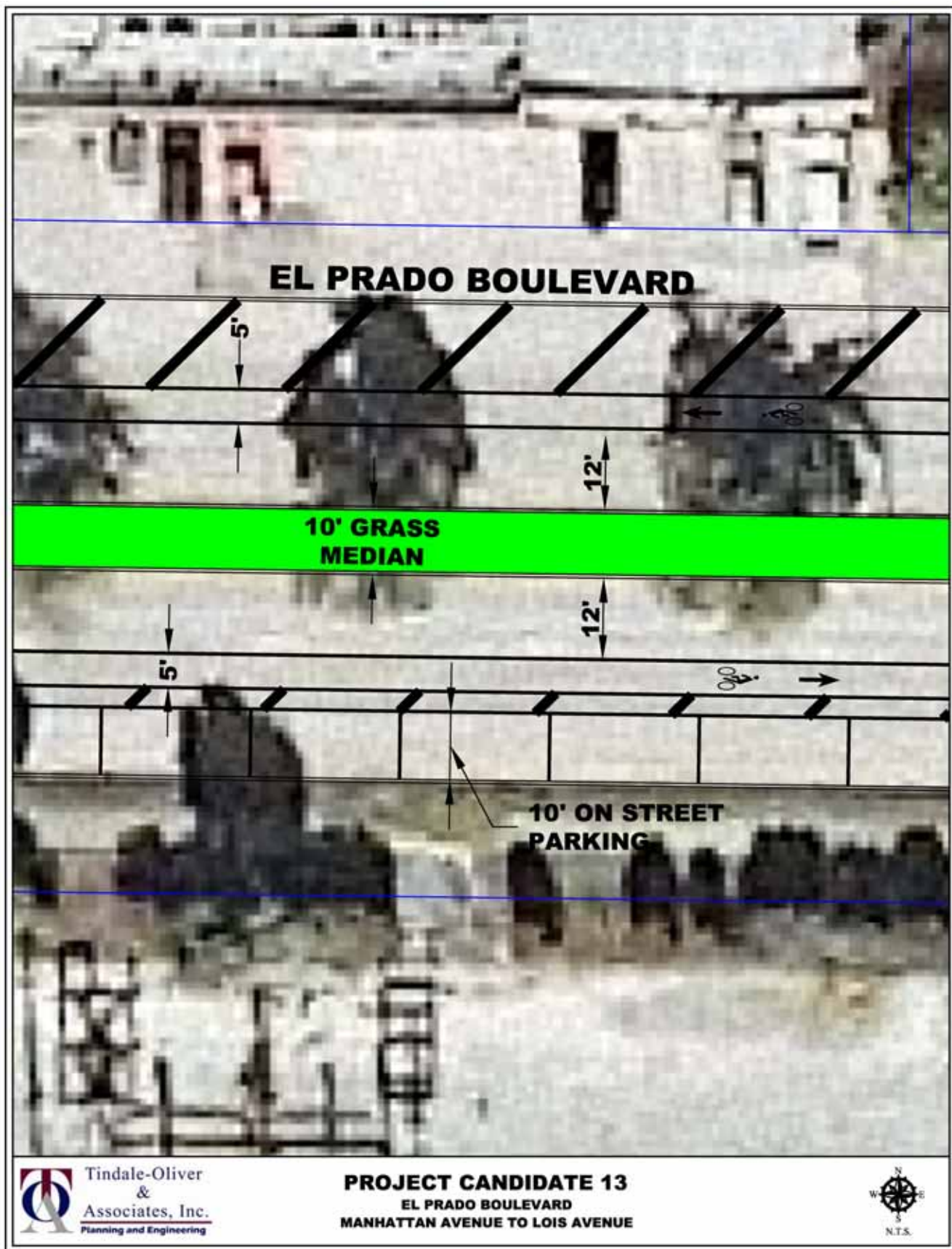
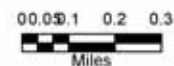
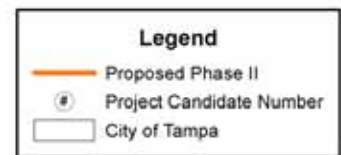
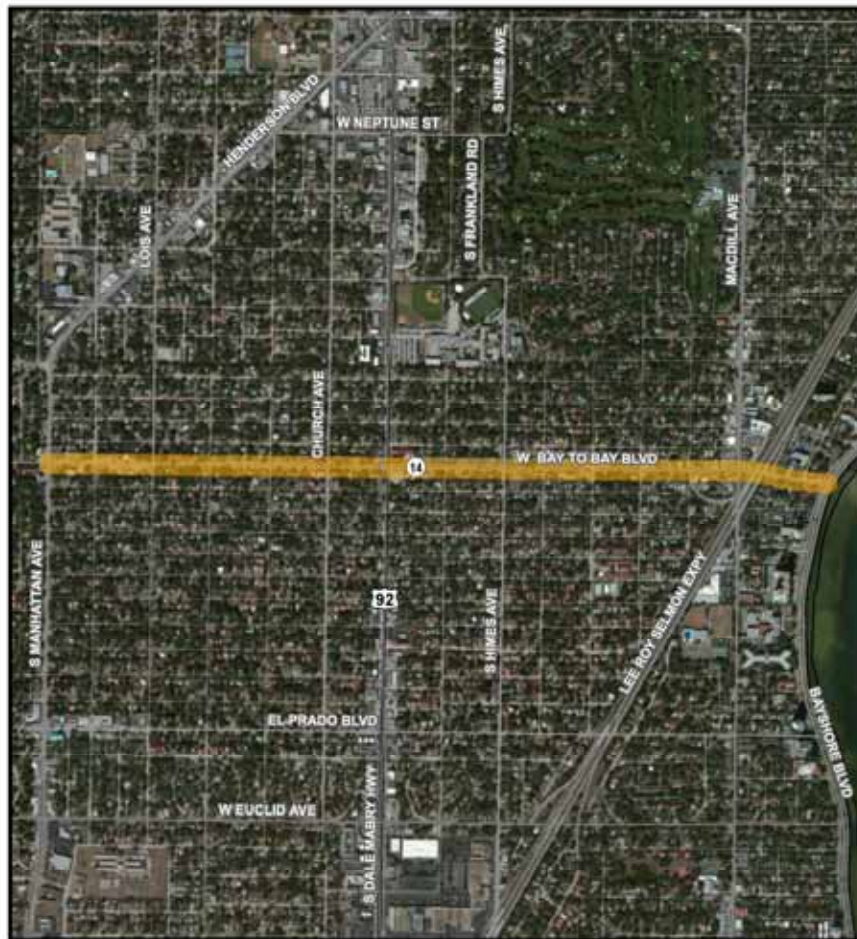


Figure 13C: El Prado Blvd Lane Diet – Manhattan Ave to Lois Ave

Project Candidate 14 – Bay to Bay Boulevard from Manhattan Avenue to Bayshore Boulevard



On	From	To	Section Type	WB				Median/ TWLTL	EB			
				Drainage Type	Sidewalk	Outside Lane	Inside Lane		Inside Lane	Outside Lane	Sidewalk	Drainage Type
Bay to Bay Blvd	Manhattan Ave	Lois Ave	4D	Urban	5	11	10	13	11	11	5	Urban
Bay to Bay Blvd	Lois Ave	MacDill Ave	4U	Urban	6	11	11	-	11	11	6	Urban
Bay to Bay Blvd	MacDill Ave	Bayshore Blvd	4U	Urban	5	12	11	-	11	9	-	Urban

Table 14A: Project Candidate 14 Cross Section

The typical section of Bay to Bay Boulevard is a 4-lane undivided roadway with a total pavement width of 43-44-feet. Between Manhattan and Lois, it expands to up to 56-feet. The speed limit is 35 mph. The segment from Manhattan Avenue to Lois Avenue has small 13-foot wide median islands. The existing cross section would not allow for restriping of the roadway to add bike lanes and maintain the 4-lane undivided travel lanes. A lane diet could be a possibility depending on the volume and capacity data. Table 14B shows the City's volume data for the analyzed segments.

The AADT volumes are borderline for consideration of a lane diet, and a detailed study would be required to determine the feasibility of a lane diet project. As with previous recommendations, detailed intersection capacity and lane utilization would be required. Bay to Bay does not have turn lanes at most of the intersections, with the exception of Dale Mabry and MacDill Avenue. Due to the characteristics of this roadway, it is important that a detailed traffic engineering study be completed, as well as community input, to determine the viability of this project. The study should determine if the inside lanes are being used as defacto left turn lanes. The peaking characteristics should be carefully studied along this major east/west arterial prior to project programming..

On	From - To	Existing Road Type	Date of Count	Existing Daily Volume	AADT	Existing LOS D Capacity	Existing v/c	Existing LOS	Link Status
Bay to Bay Blvd	Manhattan Ave to Dale Mabry Hwy	4LU	03/26/08	12447	12966	24773	0.52	B	NON-CRITICAL
Bay to Bay Blvd	Dale Mabry Hwy to Himes Ave	4LU	11/02/10	17041	17041	24773	0.69	C	NON-CRITICAL
Bay to Bay Blvd	Himes Ave to MacDill Ave	4LU	11/02/10	18201	18201	24773	0.73	C	NON-CRITICAL
Bay to Bay Blvd	MacDill Ave to Bayshore Dr	4LU	03/12/08	15400	16211	24773	0.65	C	NON-CRITICAL

Table 14B: Bay to Bay Boulevard Lane Diet Segment Traffic Data

The study should consider a lane diet as follows:

From Manhattan Avenue to Lois Avenue, restripe for one wide lane in each direction plus a bike lane and maintain the existing median left turn lanes and islands. Reconfigure intersection turn approaches and turn lanes as necessary. East of Lois Avenue, perform a lane diet and convert from a 4-lane undivided to a 3-lane section (two travel lanes and a TWLTL) plus bike lanes.

Project Candidate 15 – San Jose Street/Palmira Avenue Corridor



On	From	To	Section Type	WB			Median/ TWLTL	EB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
San Jose St	Westshore Blvd	Manhattan Ave	2U	Urban	5	12	-	12	-	Urban
Palmira Ave	Manhattan Ave	Lois Ave	2U	Urban	-	11.5	-	11.5	-	Urban
Palmira Ave	Lois Ave	Church Ave	2U	Urban	5	11.5	-	11.5	5	Urban

Table 15: Project Candidate 15 Cross Section

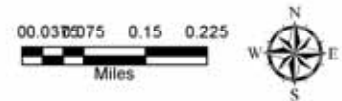
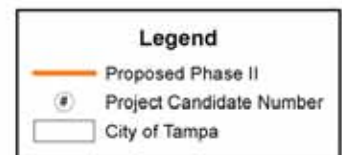
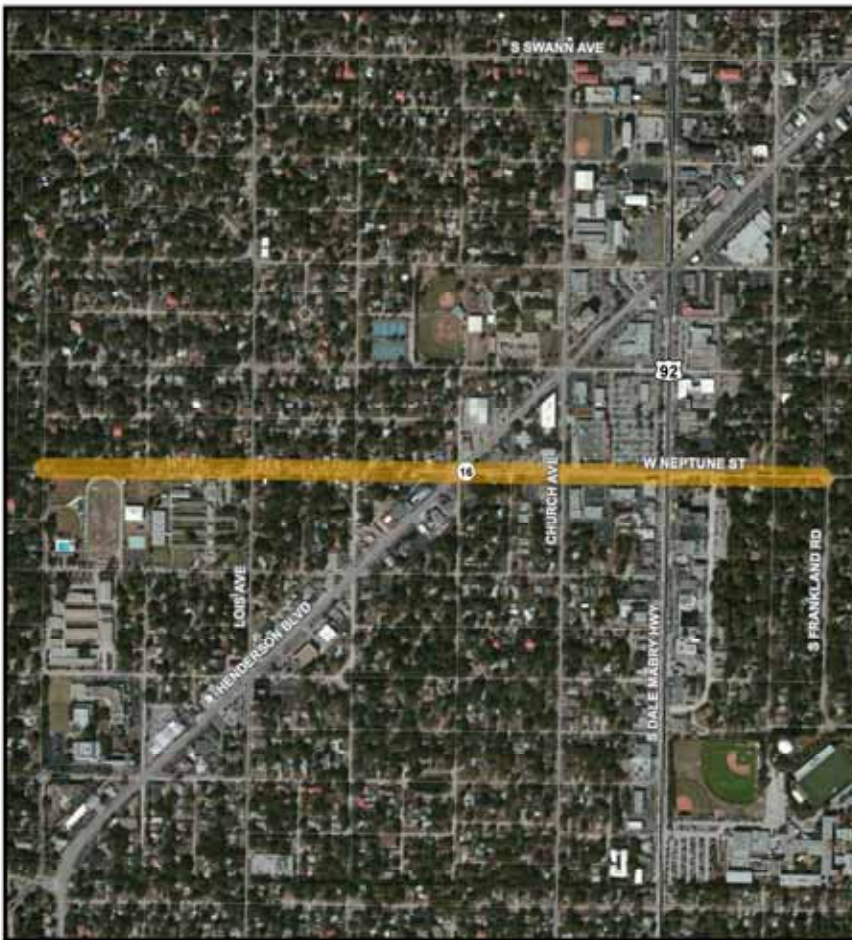
San Jose Street from Westshore Boulevard to Manhattan Avenue

Install shared lane markings. The San Jose St/Manhattan Ave intersection should be reviewed for potentially removing the dual eastbound left turn lane onto Manhattan Avenue/Henderson Avenue.

Palmira Avenue from Manhattan Avenue to Church Avenue

Palmira Avenue is a 2-lane undivided roadway with approximately 23-24-foot wide pavement. The speed limit is 25 mph. Install shared lane markings.

Project Candidate 16 – Neptune Street from Manhattan Avenue to Frankland Road



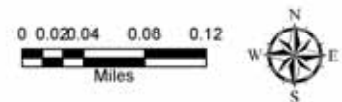
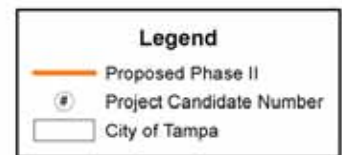
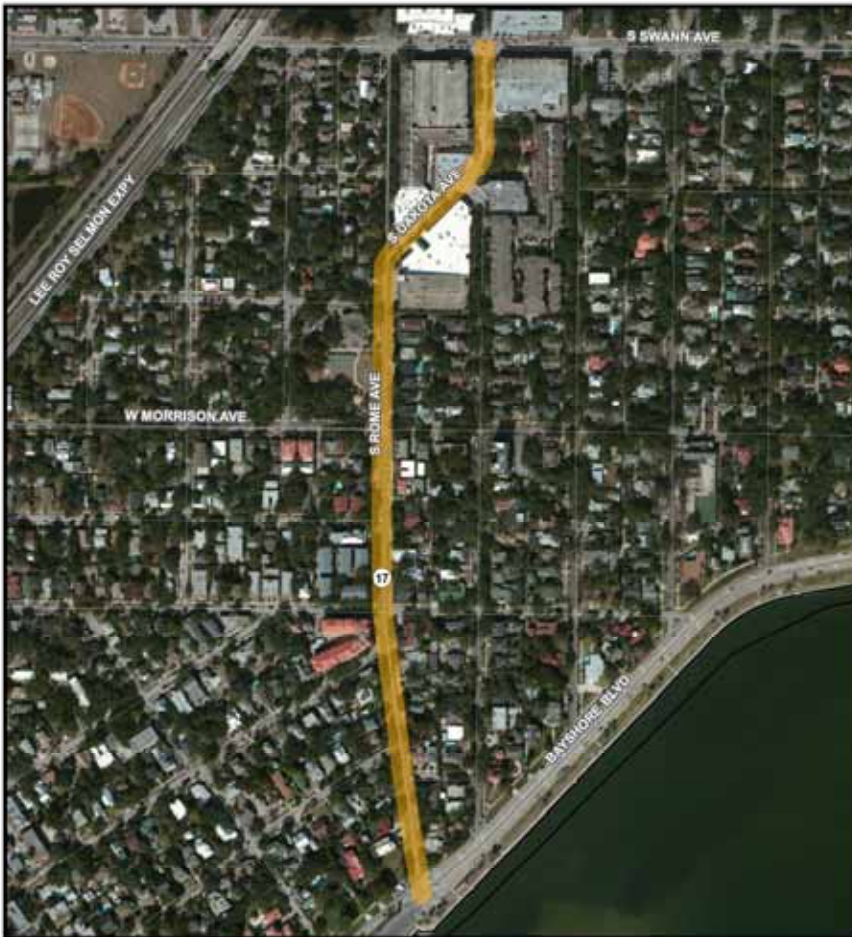
On	From	To	Section Type	WB				Median/ TWLTL	EB			
				Drainage Type	Sidewalk	Striped area	Travel Lane		Travel Lane	On Street Parking	Sidewalk	Drainage Type
Neptune St	Manhattan Ave	Lois Ave	2U	Rural	-	-	10	-	10	10	5	Rural
Neptune St	Lois Ave	Church Ave	2U	Rural	-	-	10	-	10		5	Rural
Neptune St	Church Ave	Dale Mabry	2U	Urban	5	8	13	-	13		5	Rural
Neptune St	Dale Mabry Hwy	S. Clearview Ave	3D	Rural	5	-	11	11	12	14	-	Rural
Neptune St	S. Clearview Ave	S. Sterling Ave	3D	Rural	5	-	11	10	12	-	-	Rural
Neptune St	S. Sterling Ave	S. Frankland Rd	2U	Urban	4	-	10	-	10	-	5	Urban

Table 16: Project Candidate 16 Cross Section

Neptune Street is a 2-lane undivided roadway with a posted speed limit of 25 mph. The Henderson Boulevard and Dale Mabry Highway intersections are signalized. Install shared lane markings and upgrade the pedestrian crossings to HECW at the Henderson Boulevard and Church Avenue intersections. This segment will provide a connection between the Manhattan Avenue and Church Avenue corridors. The extension of shared lane markings past Dale Mabry Highway to Frankland Road will provide a connection, for both of these corridors to/from, the residential areas east of Dale Mabry Highway. It should be noted that east of Henderson Boulevard to Himes Avenue the existing daily volume is approximately 4,200 vehicles and the road is operating at a level of

service A. Prior to development of this project east of Henderson, the peaking characteristics of the roadway should be reviewed to ensure that this connection will not have a detrimental impact to the safe mobility of users.

Project Candidate 17 – Rome Avenue/Snow Avenue from Bayshore Boulevard to Swann Avenue



On	From	To	Section Type	SB				Median/ TWLTL	NB			
				Drainage Type	Sidewalk	On Street Parking	Travel Lane		Travel Lane	On Street Parking	Sidewalk	Drainage Type
Rome Ave	Bayshore Blvd	Snow Ave	2U	Urban	6	8	14	-	14	8	6	Urban
Snow Ave/South Dakota Ave	Rome Ave	S. Village Cir	2D	Urban	15	-	15	10	15	-	7	Urban
Snow Ave/South Dakota Ave	S. Village Cir	Swann Ave	2U	Urban	30	-	15	-	22	-	12	Urban

Table 17: Project Candidate 17 Cross Section

Rome Avenue from Bayshore Boulevard to Snow Avenue

Rome Avenue from Bayshore Boulevard to Snow Avenue is a 2-lane undivided roadway with on-street parking on both sides of the roadway. The posted speed limit is 25 mph. Pavement width is approximately 42-44-feet with on street parking.

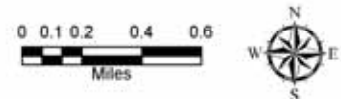
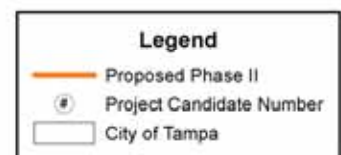
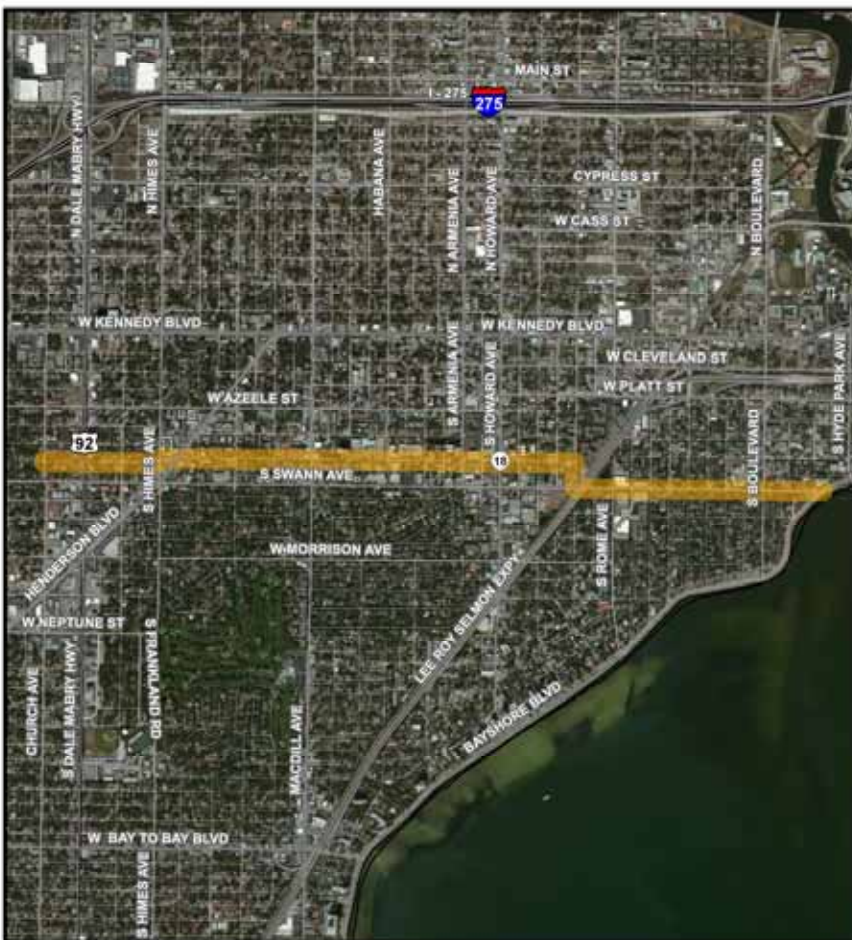
Install shared lane markings. Install HECW and pedestrian refuge island at intersection of Rome Avenue and Bayshore Boulevard.

Snow Avenue/South Dakota Avenue from Rome Avenue to Swann Avenue

Snow Avenue is the continuation of Rome Avenue, which then continues to South Dakota Avenue and connects to Swann Avenue. The posted speed limit is 25 mph and the roadway winds through a town center/shopping area. The speed limit is 25 mph and the lane widths range from approximately 15 to 22-feet. Portions of this segment have raised brick medians.

Install shared lane markings. Upgrade Swann Avenue at South Dakota Avenue pedestrian crossing to HECW.

Project Candidate 18 – Swann Avenue/De Leon Street Corridor



On	From	To	Section Type	SB/WB			Median/ TWLTL	NB/EB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
De Leon St	Church Ave	MacDill Ave	2U	Rural	5	10	-	10	5	Rural
De Leon St	MacDill Ave	Armenia Ave	2U	Rural	5	11	-	11	5	Rural
De Leon St	Armenia Ave	Freemont Ave	2U	Rural	5	9	-	9	5	Rural
Freemont Ave	De Leon St	Swann Ave	2U	Rural	-	12	-	12	5	Rural
Swann Ave	Freemont Ave	Bayshore Blvd	3D	Urban	5	20	12	12	5	Urban

Note: Intermittent sidewalk along De Leon St swithes between north and south sides.

Table 18: Project Candidate 18 Cross Section

De Leon Street from Church Avenue to Swann Avenue

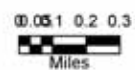
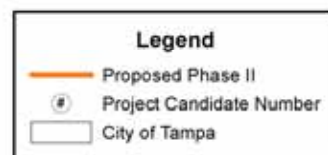
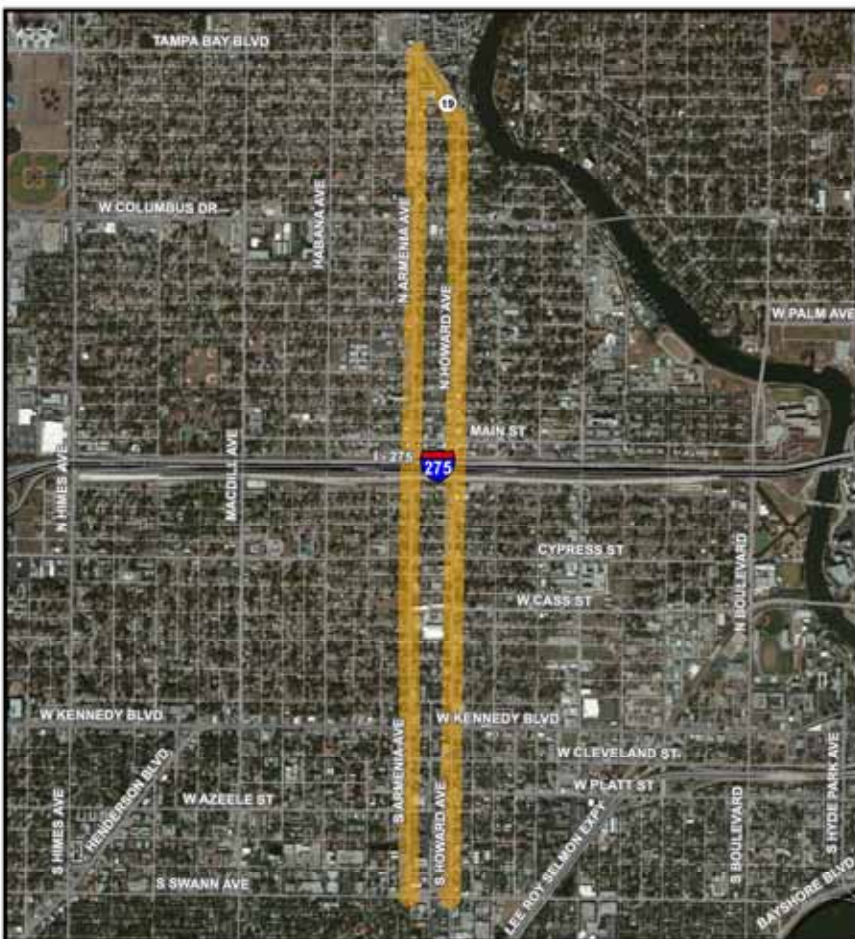
Install shared lane markings along De Leon Street from Church Avenue to Fremont Avenue. Install pedestrian crossings with RRFB at the Howard Avenue, Armenia Avenue, MacDill Avenue, Henderson Boulevard, and Himes Avenue intersections. Install a raised pedestrian island at the De Leon Street and Dale Mabry Highway

intersection. Install shared lane markings along Fremont Avenue from De Leon Street to Swann Avenue and direct bicyclists via signage.

Swann Avenue from Fremont Avenue to Bayshore Boulevard

Swann Avenue from Fremont Avenue to Bayshore Boulevard has enough existing pavement width to restripe for bike lanes. Portions of this segment are 2 lane sections with a 30-foot wide pavement. At some points turn lanes are added to provide a 3 or 4 lane section with 48 or 60-foot pavement widths respectively. West of the Crosstown Expressway, the pavement width is not wide enough for bike lanes. High traffic volumes between MacDill Avenue and Howard Avenue coupled with the narrow pavement widths also eliminate Swann Avenue west of Fremont Avenue from the addition of shared lane markings.

Project Candidate 19 – Armenia Ave./Howard Ave. from Tampa Bay Blvd. to Swann Ave



On	From	To	Section Type	SB											
				West side Drainage Type	West side Sidewalk	West side SB On Street Parking	West side Pavement Markings	Outside Lane	Middle Lane Inside	Middle Lane Outside	Inside Lane	East side Pavement Markings	East side On Street Parking	East side Sidewalk	East side Drainage Type
Armenia Ave	Swann Ave	Azeele St	3U	-	5	-	-	10	-	-	11	-	-	5	Urban
Armenia Ave	Azeele St	Platt St	2U	Urban	5	-	6.5	13.5	-	-	10	13	-	7	Urban
Armenia Ave	Platt St	Cleveland St	4U	Urban	5	-	-	10	11	11	9	-	-	-	Urban
Armenia Ave	Cleveland St	Kennedy Blvd	2U	Urban	5	8	-	13	-	-	13	-	8	6	Urban
Armenia Ave	Kennedy Blvd	Columbus Dr	2U	Urban	5	8	-	16	-	-	15	-	8	5	Urban
Armenia Ave	Columbus Dr	Tampa Bay Blvd	2U	Urban	5	8	-	12	-	-	12	-	8	6	Urban
Howard Ave	Swann Ave	Azeele St	2U	Urban	6	-	-	-	-	-	14	-	-	-	-

On	From	To	Section Type	NB											
				West side Drainage Type	West side Sidewalk	West side On Street Parking	West side Pavement Markings	Inside Lane	Middle Lane Inside	Middle Lane Outside	Outside Lane	East side On Street Parking	East side Pavement Markings	East side Sidewalk	East side Drainage Type
Armenia Ave	Swann Ave	Azeele St	3U	-	-	-	-	-	-	-	22	-	-	5	Urban
Howard Ave	Swann Ave	Azeele St	2U	-	-	-	-	13	-	-	-	-	-	5	Urban
Howard Ave	Azeele St	Cleveland St	2U	Urban	-	8	-	10	-	-	10	-	-	5	Urban
Howard Ave	Cleveland St	Kennedy Blvd	4U	Urban	5	-	-	12	10	10	11	-	-	6	Urban
Howard Ave	Kennedy Blvd	I-275	3U	Urban	9	8	-	9.5	11	-	9.5	-	-	5	Urban
Howard Ave	I-275	St. Conrad St	2U	Urban	6	8	-	12	-	-	13	8	-	5	Urban
Howard Ave	St. Conrad St	Aileen St	2U	Urban	6	-	-	19.5	-	-	20.5	-	-	5	Urban
Howard Ave	Aileen St	Ivy St	2U	Urban	5	-	-	20	-	-	11	-	-	10	Urban
Howard Ave	Ivy St	Abdella St	2U	Urban	6	-	4	8	-	-	17	-	-	4	Urban
Howard Ave	Abdella St	Braddock St	2U	Urban	-	-	8.5	12.5	-	-	13	-	8	5	Urban
Howard Ave	Braddock St	Tampa Bay Blvd	3U	Urban	-	-	-	11	13	13	11	-	-	5	Urban

Table 19: Project Candidate 19 Cross Section

Armenia Avenue from Swann Avenue to Azeele Street

From Swann to Azeele the speed limit is 30 mph. This section is a two way roadway with two southbound travel lanes, one northbound travel lane and a northbound parking lane. Total pavement width is 43-feet. This segment could be restriped with a 4-foot southbound bike lane, one 11 and one 10-foot southbound travel lane, one 11-foot northbound travel lane and an 8-foot northbound parking lane.

Armenia Avenue from Azeele Street to Platt Street

This section has a 30 mph speed limit and becomes a one way southbound roadway with shared SBT/SBR, SBT, and SBL lanes with total pavement width of 43-feet. This segment could be converted to a 6-foot bike lane, a 12-foot SBT/SBR, and 11-foot SBT and SBL lanes.

Armenia Avenue from Platt Street to Cleveland Street

This section maintains a 30 mph speed limit and is a one way southbound roadway with two lanes of input from the Cleveland Street/Armenia Avenue intersection. Existing lane configuration is four southbound lanes that turn into SBR, SBT, SBT/SBL and SBL lanes at the Platt Street intersection. Total pavement width is approximately 41-feet. This segment could be converted to a 12-foot SBR, a 5-foot bike lane, and a 12-foot SBT and SBL lanes. Perform a turning movement count (TMC) at the Platt Street intersection and undertake a capacity analysis to determine if this lane configuration will operate acceptably.

Armenia Avenue from Cleveland Street to Kennedy Boulevard

From Cleveland Street to Kennedy Boulevard, the speed limit is 30 mph. This section is a one way southbound roadway with two travel lanes and on-street parking on both sides of the road. Total pavement width is approximately 42-feet. Option one is to restripe with 10-foot parking on the west side, a 14-foot travel lane with shared lane markings, a 10-foot travel lane and an 8-foot parking lane on the east side. Option two is to restripe with 10-foot parking on the west side, a 6-foot bike lane, and two 12-foot travel lanes.

Armenia Avenue from Kennedy Boulevard to Columbus Drive

From Kennedy Boulevard to Columbus Drive, the speed limit is 40 mph. This section is one way with two southbound lanes. Two 8-foot striped/parking lanes exist on both sides of the travel lanes. Total pavement width ranges from 44 to 48-feet. A parking utilization study should be done to determine whether on-street parking should be preserved on the east or the west side of the road. For the 44-foot sections, restripe with a 10/6/11/11/10 foot lane configuration. For the 48-foot sections, restripe with a 9/6/10.5/10.5/8 foot lane configuration, or eliminate one side of the on-street parking depending on the results of the parking study. Collect TMC's at major intersections and perform an analysis to determine the proper lane configuration that will accommodate the bike lanes.

One possible option for bike lanes in the vicinity of I-275, is to remove the south bound shared through/right lane at Main Street and the southbound right turn lane at Green Street to accommodate the bike lane. Convert the existing striped pavement section on the west side of the road to a bike lane under the I-275 overpass. Figure 19A shows a concept sketch of this. A detailed study should be performed to determine the final recommendations for this segment.

Consider bulb outs on whichever side of the road is chosen to maintain parking. Evaluate the side streets for enhancement of the crosswalks to high emphasis crossings (especially Beach Street and Pine Street). Evaluate the potential of shifting the signalized pedestrian crossing south of Pine Street to the Pine Street intersection.

Armenia Avenue from Columbus Drive to Tampa Bay Boulevard

On this section the speed limit is 40 mph. This section is one way with two southbound lanes. There are two striped pavement sections on both sides of the travel lanes with limited on-street parking. Total pavement width is approximately 40-feet. A parking utilization study should be done to determine whether on-street parking should be preserved on the east or the west side of the road. The lane configuration could be converted to a 10/6/12/12 or a 6/12/12/10 section depending on the results of the study. Consider bulb outs on whichever side parking is maintained. A TMC and detailed analysis is required to determine the proper lane configuration at Columbus Drive that will accommodate a bike lane. Install HECW at the side street intersections

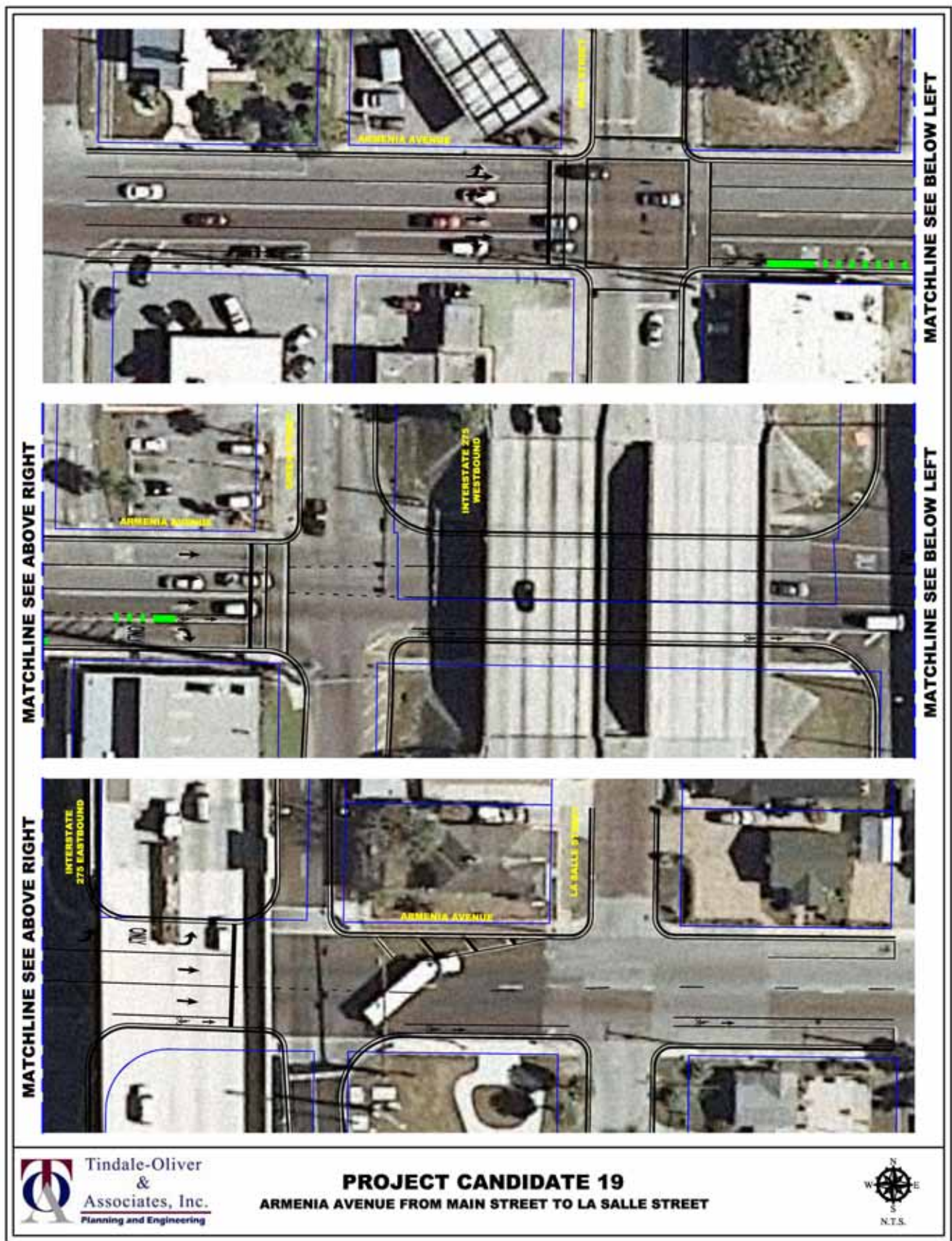


Figure 19A: Armenia Avenue at I-275 Concept

Howard Avenue from Swann Avenue to Azele Street

The speed limit is 30 mph. Currently, this is a two way 2-lane undivided roadway with a total pavement width of 27-feet. Install shared lane markings.

Howard Avenue from Azele Street to Cleveland Street

The speed limit is 30 mph. Currently, this is a one way northbound roadway with two travel lanes and on-street parking on the west side. Total pavement width is 28-feet. This segment could be restriped to an 8-foot parking lane, a 10-foot travel lane, and a 12-foot travel lane with shared lane markings.

Howard Avenue from Cleveland Street to Kennedy Boulevard

The speed limit is 30 mph. Currently, this is a one way northbound road with four lanes (one NBL, two NBT, and a NBT/NBR lane at Kennedy Boulevard). Total pavement width is 43-feet. Collect TMC's at Cleveland Street and Kennedy Boulevard to determine the proper lane configuration of the intersections. Continue the shared lane marking in a wider outside lane north to Kennedy Boulevard.

Howard Avenue from Kennedy Boulevard to I-275

This segment of Howard Avenue is a 3-lane, one way northbound section. On-street parking exists on the west side of the road for a portion of the segment, the rest is striped. The speed limit is 40 mph. Pavement width ranges from 36 to 40-feet. At Gray Street, the total pavement width is 38-feet for the on-street parking and three NB travel lanes. With the parking lane intact, the lane widths are substandard. From Gray Street to Cass Street the pavement width increases to 48-feet with the addition of a left turn lane. North of Cass Street the section reduces to 38-feet wide. Daily volumes are high enough that a lane diet is not feasible. The on-street parking appears underutilized and ample on-street parking exists on the side streets. A parking utilization study should be performed to determine the need for parking.

The west side on-street parking could be removed and restriped with a bike lane on the east side of the road. Remove the northbound left turn lane at Cypress Street to accommodate the bike lane. Under the I-275 overpass, a 5-6-foot striped pavement section exists on the east side of the roadway. Restripe this area with a bike lane. A lane drop exists south of I-275 that would require a bike lane drop configuration.

Vacant parcels exist along the east side south of Cypress Street. This provides opportunity for future widening to restore a left or right turn lane.

Howard Avenue from I-275 to St. Conrad Street

Travel lanes widths range from 12-13-feet. Total pavement width is approximately 41-feet. The speed limit is 30 mph. The segment consists of two northbound travel lanes and an 8-foot parking lane on both sides of the road. Bulb outs exist for the on-street parking. Perform a parking utilization study to determine the parking demand. If parking can be eliminated on one side, restripe for bike lanes with an 11/12/12/6 foot lane configuration. If parking cannot be removed, restripe with an 8/11/14/8 with shared lane markings.

Howard Avenue from St. Conrad Street to Aileen Street

The speed limit is 30 mph from St. Conrad Street to Columbus Drive and 40 mph from Columbus Drive to Aileen Street. From St. Conrad Street to Aileen Street the on-street parking drops and two northbound travel lanes

exist with a total width of 40-feet. Restripe for bike lanes and on-street parking with a 10/12/12/6 or 13/11/6/10 foot lane configuration. Provide bulb outs on whatever side is chosen for on-street parking. Collect a TMC at Columbus Drive and determine the proper intersection lane configuration to accommodate a bike lane.

Howard Avenue from Aileen Street to Ivy Street

The speed limit is 40 mph. From Aileen Street to Ivy Street the pavement width reduces to 31-feet. Restripe with bike lanes and two travel lanes.

Howard Avenue from Ivy Street to Braddock Street

The speed limit is 40 mph in this section. Striped pavement up to 13-feet wide delineates the travel lanes through the curve north of Abdella Street. This striping could be retracted to provide for a bike lane. Figure 19B illustrates this concept.

Howard Avenue from Braddock Street to Tampa Bay Boulevard

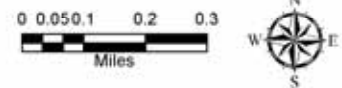
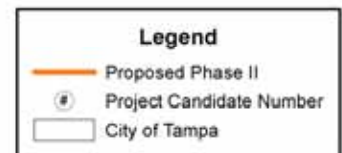
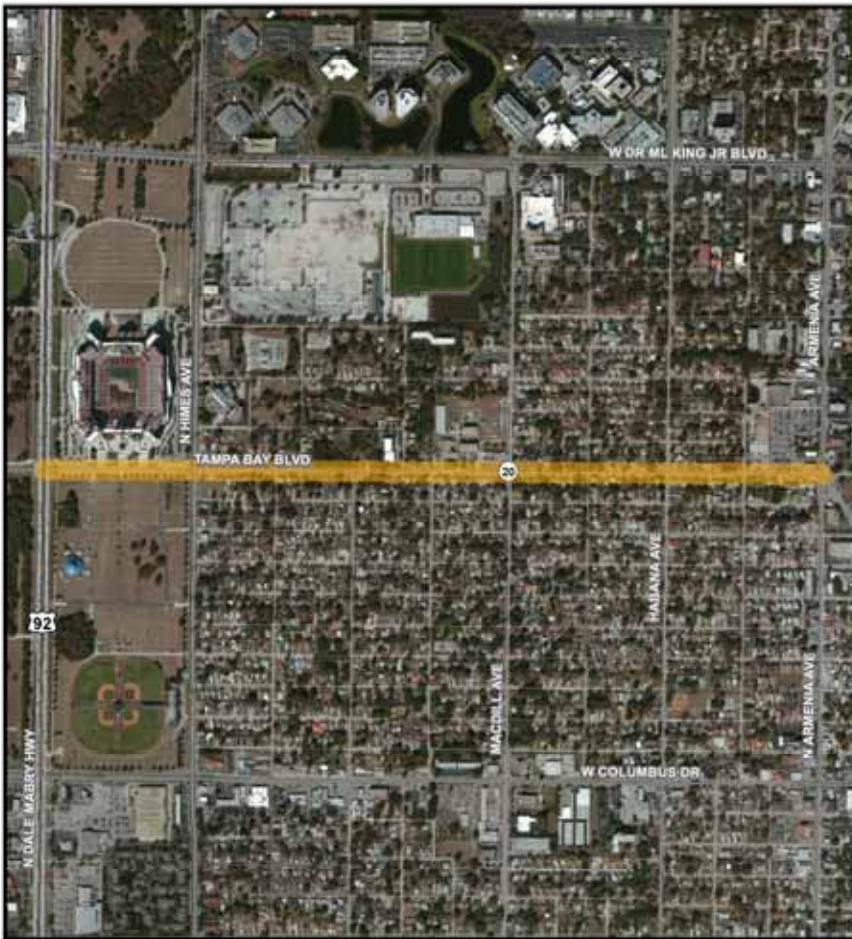
The speed limit is 40 mph. From Braddock Street to Tampa Bay Boulevard four lanes approaching the intersection (one left, two through lanes, and a channelized right). The left and two through lanes have a total width of 37-feet. Reduction of these lanes to 11-feet wide and continuation the bike lane to the northbound stop bar, where it will terminate is an option. Appropriate signage indicating the bike lane termination would be needed. Another is the removal of a NB auxiliary lane if a TMC and associated analysis show this to be feasible. An operation analysis is recommended.

It should be noted that the City has expressed concern about excessive speed and the “road bend”. The City has indicated that further study, particularly a safety analysis, be undertaken prior to developing this project.



Figure 19B: Howard Avenue Bike Lane – Ivy Street to Braddock Street

Project Candidate 20 – Tampa Bay Boulevard from Dale Mabry Highway to Armenia Avenue

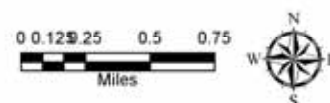
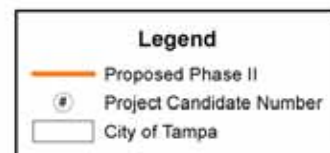
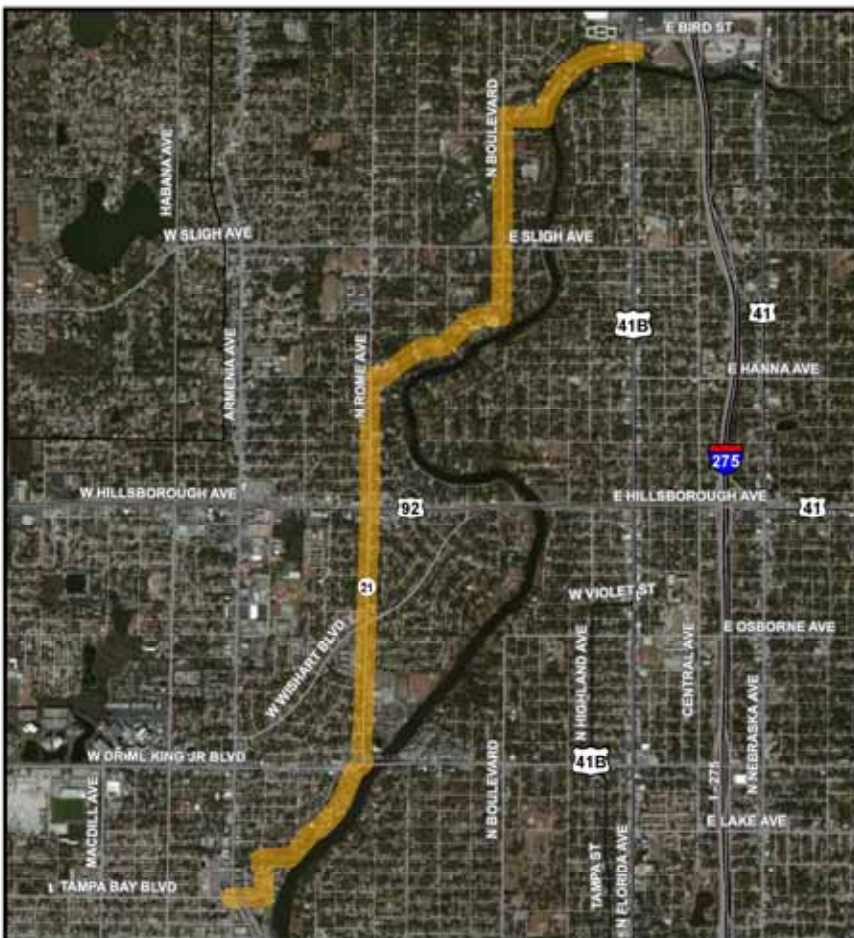


On	From	To	Section Type	SB/WB				Median/ TWLTL	NB/EB			
				Drainage Type	Sidewalk	Outside lane	Inside lane		Inside lane	Outside lane	Sidewalk	Drainage Type
Tampa Bay Blvd	Dale Mabry Hwy	Himes Ave	4D	Urban	5	14	12	16	12	12	5	Urban
Tampa Bay Blvd	Himes Ave	Armenia Ave	2U	Rural	5	12	-	-	-	12	5	Rural

Table 20: Project Candidate 20 Cross Section

Speed limit is 30 mph. The Dale Mabry Highway to Himes Avenue segment is a 4-lane divided section adjacent to Raymond James Stadium. Lane widths are generally 12-14-feet. East of Himes Avenue, the roadway is a 2-lane undivided section with 12-foot lanes. Install shared lane markings for the entire corridor.

Project Candidate 21 – Rome Avenue Corridor



On	From	To	Section Type	SB/WB			Median/ TWLTL	NB/EB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
Tampa Bay Blvd	Armenia Ave	Howard Ave	3D	Urban	6	12	12	12	6	Urban
Howard Ave	Tampa Bay Blvd	Woodlawn Ave	2U	Urban	-	9	-	10	-	Urban
Woodlawn Ave	Howard Ave	N Riverview Ave	2U	Urban	4	9	-	9	4	Urban
N Riverview Ave	Woodlawn Ave	Rome Ave./Dr MLK Jr Blvd	2U	Urban	-	10	-	10	-	Urban
Rome Ave	N Riverview Ave		2U	Urban	5	12	-	12	-	Urban
Rome Ave	N Riverview Ave/ Dr MLK Jr Blvd	Hillsborough Ave	2U	Urban	5	10	-	12	-	Urban
Rome Ave	Hillsborough Ave		2U	Urban	6	11	-	11	6	Urban
Rome Ave	Hillsborough Ave	Hanna Ave	2U	Urban	5	11	-	11	-	Urban
Rome Ave	Alicia Ave/Hanna Ave		2U	Urban	4	10	-	10	-	Urban
Alicia Ave/Hanna Ave	Rome Ave	N Boulevard	2U	Urban	-	9	-	9	-	Urban
N Boulevard	Alicia Ave	Sligh Ave	2U	Urban	-	9	-	9	-	Urban
N Boulevard	Sligh Ave		2U	Urban	-	9	-	9	-	Urban
N Boulevard	Sligh Ave	Kirby St	2U	Urban	5	9	-	10	5	Urban
Kirby St	N Boulevard		2U	Urban	-	10	-	10	-	Urban
Kirby St	N Boulevard	N Rivershore Dr	2U	Urban	-	9	-	9	-	Urban
N Rivershore Dr	Kirby St	Florida Ave	2U	Urban	-	9	-	9	-	Urban

Table 21: Project Candidate 21 Cross Section

Tampa Bay Boulevard from Armenia Avenue to Howard Avenue

Install shared lane markings.

Howard Avenue from Tampa Bay Boulevard to Woodlawn Avenue

Install shared lane markings.

Woodlawn Avenue from Howard Avenue to N Riverview Avenue

Install shared lane markings.

N Riverview Avenue from Woodlawn Avenue to Rome Avenue/Dr MLK Jr Boulevard

The speed limit is 25 mph. The 2-lane undivided roadway has lane widths of 10-feet. Install shared lane marking. Construct a 6 to 10-foot sidewalk on either side of the road depending on tree and fire hydrant impacts.

Rome Avenue at N Riverview Avenue

Install high emphasis crosswalks and enhance the lighting.

Rome Avenue from N Riverview Avenue/Dr MLK Jr Boulevard to Hillsborough Avenue

The speed limit from N Riverview Avenue to Hillsborough Avenue is 30 mph. The 2-lane undivided roadway has lane widths of 10-12-feet. Install shared lane markings. Construct a 10-foot multi-use path along the west side of Rome Avenue. The west side minimizes drainage and oak tree impacts and already has a sidewalk crossing under Dr MLK Jr Boulevard that could be expanded. Install a crosswalk south of Ferris Avenue to provide access to the Hillsborough River. Consider a pocket park/pier along the river near the Dr MLK Jr Boulevard bridge, which is City owned land. In the long term, consider widening to add paved shoulders/bike lanes or widening to a 2-lane divided section with bike lanes.

Rome Avenue at Hillsborough Avenue

Verify that the lighting in the crosswalk area meets the appropriate standards.

Rome Avenue from Hillsborough Avenue to Hanna Avenue

The speed limit is 30 mph. This 2-lane undivided road has 11-foot lane widths. A drainage swale exists along the east side of the road. Widen the existing west side sidewalk as much as possible to provide a multi-use path. Begin addressing ROW use by businesses on the northeast corner of Rome Avenue at Hillsborough Avenue.

Rome Avenue at Alicia Avenue/Hanna Avenue

Install high emphasis crosswalks and an RRFB on the south leg.

Alicia Avenue/Hanna Avenue from Rome Avenue to N Boulevard

In this section the speed limit is 25 mph. The 2-lane undivided roadway has lane widths of 9-feet. It is recommended to install shared lane markings.

Construct a 6 to 10-foot sidewalk on the north side of Alicia Avenue from N Blvd to Lambright Street. Piping of 100-feet of swale on the northwest corner of Alicia Avenue at N Boulevard may be necessary to accommodate the sidewalk. At Lambright Street install a crosswalk and continue the sidewalk along the south side of Alicia Avenue/Hanna Avenue to Rome Avenue.

N Boulevard from Alicia Avenue to Sligh Avenue

From Alicia Avenue to Sligh Avenue, the speed limit is 25 mph. The 2-lane undivided section has 9-foot lane widths. Drainage swales exist along both sides of N Boulevard from Hiawatha Street to Alicia Avenue. Sidewalk construction may require piping of the swale. Install shared lane markings. For a longer term project, consider piping the west side swale and construct a 6 to 10-foot sidewalk. An approximately 60-foot easement exists from N Blvd/Alicia Ave to the Hillsborough River. Consider a pocket park/pier at this location.

N Boulevard at Sligh Avenue

Upgrade the existing crosswalks to high emphasis markings. Install lighting on the existing strain poles/utility poles.

N Boulevard from Sligh Avenue to Kirby Street

From Sligh Avenue to Kirby Street the speed limit is 30 mph. Approximately 18 to 25-feet of ROW exists from the edge of pavement to the ROW line on the west side of N Boulevard for the majority of the segment. Near the intersection of Sligh Avenue, where the road widens for turn lanes, this distance shrinks to about 13-feet. The City owns the parcel west of N Boulevard from Sligh Avenue to Patterson Street (Lowry Park Zoo). Reconstruct the existing sidewalk on the west side to a 10-foot multi-use path. Coordinate with the Lowry Park Zoo to wind the path to the west of the parking lot northeast of the N Blvd/Sligh Ave intersection. The sidewalk currently runs through the parking lot.

Kirby Street at N Boulevard

Install HECW and an RRFB on the north leg crossing. Construct a concrete pad at the bus stop on the northwest corner of the intersection.

Kirby Street from N Boulevard to N Rivershore Drive

Within this section the speed limit is 25 mph. The 2-lane undivided roadway has 9-foot lane widths. The south side of the road has existing utility poles as well as driveway culverts. The north side of the road is a better option for sidewalk. Install shared lane markings. Construct a 6 to 10-foot sidewalk on the north side of Kirby Street. Install a high emphasis crosswalk on the north side of the Kirby St/Rivershore Dr intersection.

N Rivershore Drive from Kirby Street to Florida Avenue

The speed limit is 25 mph from Kirby Street to Florida Avenue. The 2-lane undivided roadway has 9-foot lane widths. Other than the two cul-de-sacs on the river, the City owns the majority of the river frontage, where a “linear park” could be constructed. Install shared lane markings. Construct a 6 to 10-foot sidewalk/multi-use path on the east/river side of the road. To connect the N Rivershore corridor to the Bird Street Corridor and

provide connection across Florida Avenue, there are several options to provide for a controlled crossing from N. Rivershore Drive to Bird Street.

Option one is to use the City owned Housing Authority parcels to connect the bike route to the internal housing authority road. Moving the south leg stop bar at the intersection of Florida Avenue and Bird Street south to encompass the housing authority road would provide a signal phase for pedestrians and bicyclist to use to cross Florida Avenue. This option may require a push-button actuated protected-only west-bound left turn phase since traffic in the crosswalk may not be obvious to drivers making a permissive westbound left turn.

Option two would be to continue along N. Rivershore Drive route to Florida Avenue and use the west side of Florida Avenue to get to the Bird Street intersection. Approximately 200 feet of existing sidewalk could be widened to provide a multi-use trail by removing the 6 to 9-foot grass buffer between the back of sidewalk and the ROW line.

The third option is a long term one that could only be implemented in the event the Florida Avenue Bridge is reconstructed. This bridge is functionally obsolete, but no funding is available to reconstruct the bridge to modern standards. However, in the event of future bridge reconstruction, the Bird Street alignment could be altered to combine the Bird Street and N. Rivershore Drive intersections into one signalized intersection. Or, as an alternative, consider a roundabout similar to the 4 vs. 2 lane roundabouts on 40th Street. Figure 21 illustrates this concept.

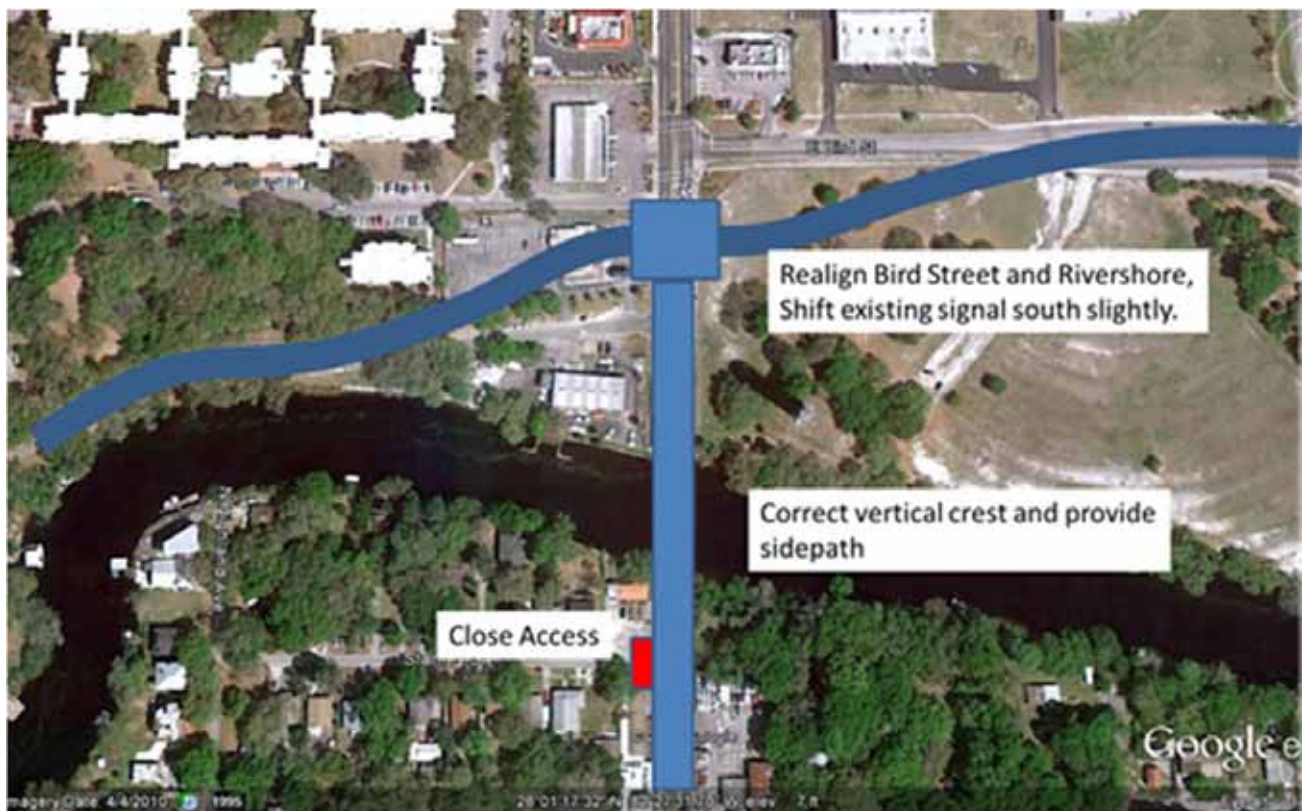
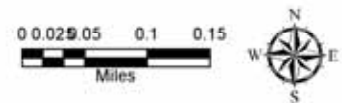
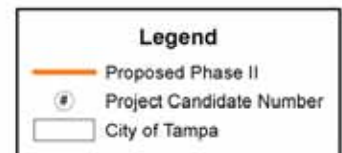
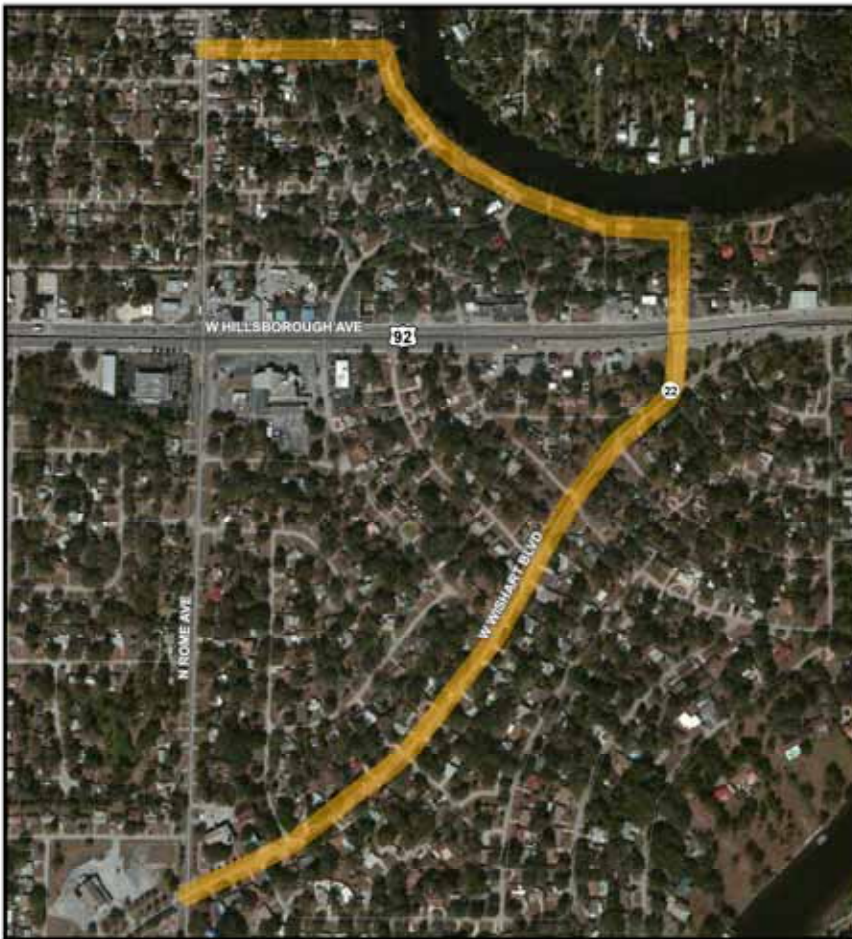


Figure 21: Long Term Florida Avenue Reconstruction Option

Project Candidate 22 – Wishart Blvd/Lee Pl/N Rivershore Dr/Powhatan Ave from Rome Ave to Rome Ave



On	From	To	Section Type	SB/WB			Median/ TWLTL	NB/EB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
Wishart Blvd	Rome Ave	Berry Ave	2U	Rural	5	10	-	10	-	Rural
Wishart Blvd	Berry Ave	Lee Place	2U	Rural	5	15	15	15	-	Rural
Lee Place	Wishart Blvd	N Rivershore Dr	2U	Urban	-	9.5	-	9.5	-	Urban
N Rivershore Dr	Lee Place	Powhatan Ave	2U	Urban	6	8.5	-	8.5	-	Rural
Powhatan Ave	N Rivershore Dr	Rome Ave	2U	Rural	-	8	-	8	5	Urban

Table 22: Project Candidate 22 Cross Section

Wishart Boulevard from Rome Avenue to Lee Place

Along this segment, the speed limit is 25 mph. Wishart Boulevard from Rome Avenue to Berry Avenue is a 2-lane undivided roadway with a total pavement width of 20-feet. From Berry Avenue to Lee Place, Wishart is a 2-lane divided roadway with two 15-foot lanes and a 15-foot landscaped median. Install shared lane markings along

this segment. Continue the shared lane markings on Wishart Boulevard past Lee Place to Hillsborough Avenue to where bike lanes exist.

Lee Place from Wishart Boulevard to N Rivershore Drive

Along Lee Place, the speed limit is 25 mph. This segment is a 2-lane undivided roadway with a total pavement width of 19-feet. Install shared lane markings for this section and construct sidewalks on both sides of Lee Place from Hillsborough Avenue to N Rivershore Drive.

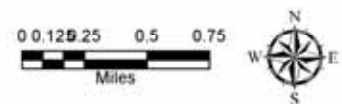
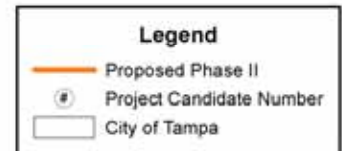
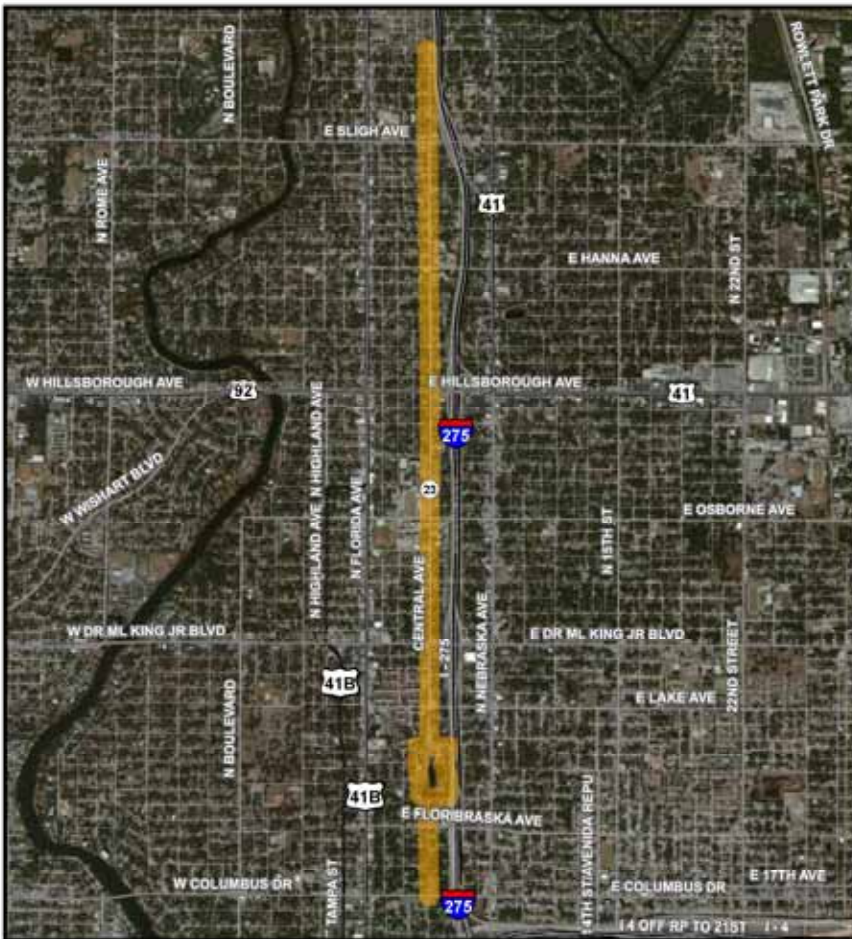
N Rivershore Drive from Lee Place to Powhatan Avenue

Speed limit is 25 mph. This segment is a 2-lane undivided roadway with a total pavement width of 17-feet. The road parallels the Hillsborough River and a 5-6-foot sidewalk exists on the river side of the road. Install shared lane markings along this segment.

Powhatan Avenue from N Rivershore Drive to Rome Avenue

Speed limit is 25 mph. This segment is a 2-lane undivided roadway with a total pavement width of 16-feet. Install shared lane markings through this segment.

Project Candidate 23 – Central Avenue Corridor from Columbus Drive to Broad Street



On	From	To	Section Type	SB/WB			Median/TWLT	NB/EB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
Central Ave	Columbus Dr	Adalee St	2U	Urban	5	11	-	13	5	Urban
E. Adalee St	Central Ave	Avon Ave	2U	Urban	-	15	-	15	-	Urban
Avon Ave	Adalee St	Emily St	2U	Urban	-	14	-	15	-	Urban
Central Ave	Emily St	Broad St	2U	Urban	5	12	-	18.5	6	Urban

Table 23: Project Candidate 23 Cross Section

Central Avenue from Columbus Drive to Adalee Street

Install shared lane markings along Central Avenue from Robles Park to Columbus Drive. Enhance crossings at Floribruska Avenue and Columbus Drive to HECW and install RFBs.

Emily St/Elmore Ave/Avon Ave/Adalee St around Robles Park

At Central Avenue and Emily Street, Central Avenue splits to go around Robles Park. Install shared lane markings along Elmore Avenue, Emily Street, Avon Avenue and Adalee Street connecting the roadways around the park.

Construct connections on Central Avenue into the park on the north and south sides of the park so bicyclists have the option to use the existing park trail.

Central Avenue from Emily Street to Broad Street

Lane widths along Central Avenue from Broad Street to Emily Street range from 30 to 35-feet. Stripe two travel lanes with bike lanes along this segment. However, if the desire is to maintain consistent treatment shared lane markings are an acceptable option.

Central Avenue from Broad Street to Bird Street

Coordinate with FDOT District 7 as part of the pending I-275 Managed Lanes PD&E to evaluate options to provide a bicycle/pedestrian bridge within the I-275 envelope or from the dead end termini of either Branch Avenue or Riverdale Avenue.

Project Candidate 24 – Broad Street/Park Cir/Park Dr from Florida Avenue to 22nd Street Park

On	From	To	Section Type	SB/WB			Median/ TWLTL	NB/EB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
Broad St	Florida Ave	Nebraska Ave	2U	Urban	5	19	-	20	5	Urban
Broad St	Nebraska Ave	Park Circle	2U	Urban	-	11	-	11	5	Urban
Park Circle/Park Drive	Broad St	N. 17th St	2U	Rural	5	10	-	10	6	Rural
Park Circle/Park Drive	N. 17th St	22nd St Park	2U	Urban	-	10	-	10	-	Urban

Table 24: Project Candidate 24 Cross Section

Broad Street from Florida Avenue to Nebraska Avenue

This segment provides an interstate crossing under I-275 with connection to the Central Avenue route, discussed above. Along this section, the speed limit is 25 mph with an approximate pavement width of 39-feet. It is

recommended to restrict on-street parking along the north side of the road and restripe the section for 4-foot bike lanes.

Broad Street from Nebraska Avenue to Park Circle

This section of Broad Street has a posted speed limit of 25 mph and a pavement width of 22-feet. It is recommended to Install shared lane markings and way finding signs.

Park Circle/Park Drive from Broad Street to 22nd Street Park

The speed limit is 25 mph. The 2-lane undivided roadway has a pavement width of approximately 20-feet. Install shared lane markings and way finding signs.

As a connection from the north to 22nd Street Park, in the long term, consider providing a pedestrian bridge west of Rowlett Park Drive from 22nd Street Park to the City owned property on Mulberry Street to provide access to Rowlett Park and Rogers Park. Figure 24 illustrates this concept.

Alternate bridge opportunities exist from Patterson Park, south of the Hillsborough River to the dead-end termini of 12th Street north of the river and from the extension of 30th Street in Rogers Park to Rowlett Park in the vicinity of the Hillsborough River Dam.

This project should be closely coordinated with, or undertaken by, the City's Parks department.

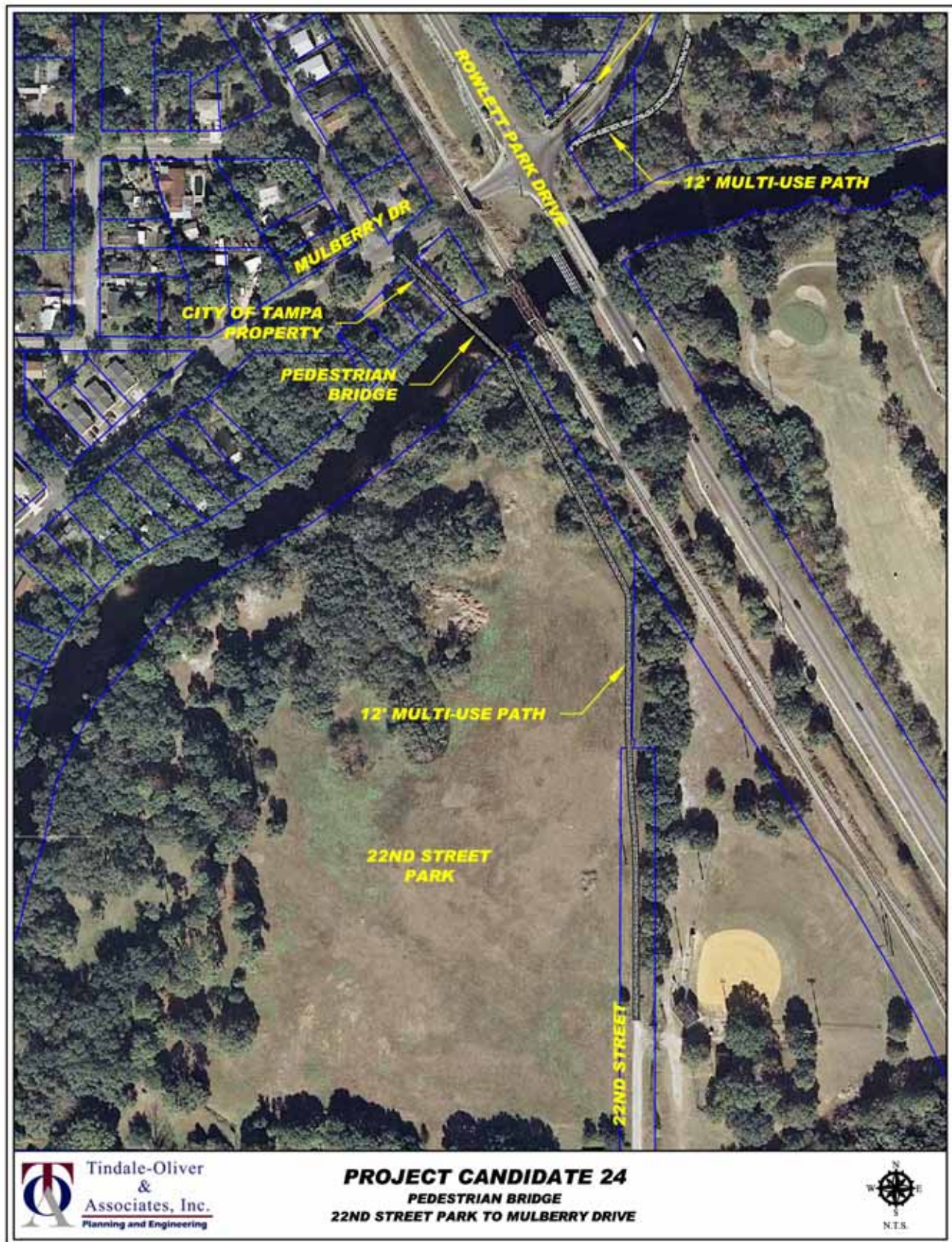


Figure 24: Pedestrian Bridge – 22nd Street Park to Mulberry Drive

Project Candidate 25 – 14th Street/15th Street/Nuccio Parkway Corridor

On	From	To	Section Type	SB/WB					Median/ TWLTL	NB/EB				
				Drainage Type	Sidewalk	Bike Lane	Outside Lane	Inside Lane		Inside Lane	Outside Lane	Bike Lane	Sidewalk	Drainage Type
Twiggs St	Meridian Ave	Nebraska Ave	4U	Urban	5	-	10	11	-	10	10	-	5	Urban
Nebraska Ave	Twiggs St	Nuccio Parkway	2D	Urban	6	4	10	-	10		10	4	10	Urban
Nuccio Parkway	Nebraska Ave	7th Ave	4D	Urban	6	-	11	12	14	13	12	-	-	Urban
12th Ave/ Nuccio Pkwy	7th Ave	15th Ave	4D	Urban	5	-	14	12	14	13	13	-	5	Urban
14th St/Avenida Republica de Cuba	12th Ave	Lake Ave	2U	Urban	5	-	20	18	-	-	-	-	5	Urban
15th St	12th Ave	Lake Ave	2U	Urban	5	-	-	-	-	20	19	-	5	Urban

Table 25: Project Candidate 25 Cross Section

14th Street and 15th Street are a two way pair, both having two lanes and speed limits of 25 mph on 15th Street and 30 mph on 14th Street. 14th Street and 15th Street meet south of I-4 and continue as two-way Nuccio Parkway. Nuccio Parkway has a speed limit of 30 mph from 14th St/15th St to 7th Avenue and 40 mph from 7th Avenue to Nebraska Avenue.

Twiggs Street from Meridian Avenue to Nebraska Avenue

Existing bike lanes.

Nebraska Avenue from Twiggs Street to Nuccio Parkway

Existing bike lanes.

Nuccio Parkway from Nebraska Avenue to 7th Avenue

This segment of Nuccio Parkway is a 4 lane divided roadway with 11-13-foot lane widths. The City of Tampa owns parcels bordering the west side of Nuccio Parkway. It is recommended that the City construct a 12-foot multi-use path on the west side.

12th Avenue/Nuccio Parkway from 7th Avenue to 15th Avenue

This segment of Nuccio Parkway is a 4 lane divided roadway with 12-14-foot lane widths. There is a signal with four legs of crossings at 7th Avenue. Drop the multi-use path and install shared lane markings to 14th/15th Street.

14th Street/Avenida Republica de Cuba from 12th Avenue to Lake Avenue

Pavement width ranges from 33-38-feet. A wide outside lane exists with a width of approximately 20 ft that is used for on street parking, however no parking pavement markings exist. Perform a parking utilization study to determine the parking demand. If on street parking is not needed, restripe with a bike lane and two southbound lanes. If parking is needed, restripe with a wide outside lane with shared lane markings plus on street parking.

15th Street from 12th Avenue to Lake Avenue

Pavement widths are approximately 32-feet where no on-street parking exists and 39-feet with on-street parking. Where on-street parking exists, restripe for 10-foot parking, 5-foot bike lane and two 13.5-foot travel lanes. Where no parking exists, restripe with a 5-foot bike lane and two 13.5-foot travel lanes.

Project Candidate 26 – 21st Street/22nd Street from Adamo Drive to 22nd Street Park

21st Street/22nd Street from Adamo Drive to Hillsborough Avenue

The Florida Department of Transportation (FDOT) currently has two projects shown in its work program along this segment. The two projects are described below:

- 22nd Street from 23rd Avenue to Lake Avenue – Sidewalk construction programmed for construction in 2012.
- 21st Street/22nd Street from Adamo Drive to Hillsborough Avenue – Urban corridor improvements programmed for preliminary engineering in 2011-2012 and construction in 2014.

As such, this segment of 21st Street/22nd Street is not addressed further in this Plan.

On	From	To	Section Type	SB			Median/ TWLTL	NB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
22nd St	Hillsborough Ave	Sligh Ave	2U	Rural	5	12	-	12	5	Rural
22nd St	Sligh Ave	22nd St Park	2U	Rural	5	9	-	9	-	Rural

Table 26: Project Candidate 26 Cross Section

22nd Street from Hillsborough Avenue to Sligh Avenue

The speed limit is 30 mph. The 2-lane undivided roadway has 12-foot travel lanes. Install shared lane markings.

22nd Street from Sligh Avenue to 22nd Street Park

The speed limit is 25 mph. This segment is a 2-lane undivided road with 9-foot lane widths and speed bumps. Install shared lane markings.

Project Candidate 27 – 34th Street from McKay Bay Nature Park to Osborne Avenue

On	From	To	Section Type	SB				Median/ TWLTL	NB			
				Drainage Type	Sidewalk	Outside Lane	Inside Lane		Inside Lane	Outside Lane	Sidewalk	Drainage Type
34th St	McKay Bay Nature Park	Adamo Dr	4D	Urban	-	13	11	8	11	13	-	Urban
34th St	Adamo Dr	21st Ave	4U	Urban	5	12	12	-	12	12	5	Urban
34th St	21st Ave	Lake Ave	2U	Urban	5	14		-		14	5	Urban
34th St	Lake Ave	MLK	4U	Urban	5	11	12	-	12	12	4	Urban
34th St	MLK	E. Chelsea St	2U	Urban	-	10	-	-	-	10	4	Urban
34th St	E. Chelsea St	Osborne Ave	2U	Urban	5	10	-	-	-	10	4	Urban

Table 27A: Project Candidate 27 Cross Section

McKay Bay Nature Park to 21st Avenue

This is a 4-lane undivided roadway. Pavement widths range from 48-56-feet. Speed limit is 40 mph north of Adamo Drive and 30 mph south of Adamo Drive. Consider a lane diet and add bike lanes. Table 27B shows volume data for the segments of 34th Street, with the exception of 34th Street south of Adamo Drive, where additional counts should be collected. Based on these volumes, 34th Street is a good candidate for a lane diet. A detailed analysis would be required at the major signalized intersection to determine the impact on capacity.

On	From	To	Existing Road Type	Date of Count	Existing Daily Volume	AADT	Existing LOS D Capacity	Existing v/c	Existing LOS	Link Status
34th St	Adamo Dr	7th Ave	4LU	01/29/08	6519	6652	17891	0.37	A	NON-CRITICAL
34th St	7th Ave	Columbus Dr	4LU	01/29/08	5906	6027	17891	0.34	A	NON-CRITICAL
34th St	Columbus Dr	Lake Ave	2LU	02/12/08	5801	6043	10725	0.56	B	NON-CRITICAL

Table 27B: 34th Street Lane Diet Segment Traffic Data

21st Avenue to Lake Avenue

Along this section, the posted speed limit is 30 mph and a total pavement width of 28-feet. Install shared lane markings.

Lake Avenue to Dr. MLK Jr. Boulevard

This segment is a 4-lane undivided roadway with a pavement width of 47-feet. The speed limit is 30 mph. Study the potential to convert to a 2-lane divided roadway with 5-foot bike lanes, one 13-foot travel lane in each direction, and an 11-foot median. Figure 27 shows a sketch of this recommendation. It is acknowledged that 34th Street is a designated truck route from Adamo Drive to Dr. MLK Boulevard. The 13-foot travel lanes should provide a comfortable buffer to the bike lane.

Dr. MLK Jr. Boulevard to Osborne Avenue

Lane widths are approximately 10-feet in this section and the speed limit is 30 mph. It is recommended to install shared lane markings.



Figure 27: 34th Street Lane Diet – Dr. MLK Jr. Blvd to Lake Avenue

Project Candidate 28 – 40th Street/McKinley Drive from Adamo Drive to Fowler Avenue

On	From	To	Section Type	SB						Median/ TWLTL	NB					
				Drainage Type	Sidewalk	Bike Lane	Outside Lane	Middle Lane	Inside Lane		Inside Lane	Middle Lane	Outside Lane	Bike Lane	Sidewalk	Drainage Type
40th St	Adamo Dr	I-4	4D	Urban	5	-	13.5	-	12	20	11.5	-	14	-	5	Urban
40th St	I-4	Hillsborough Ave	6D	Urban	5	-	12	12	11	17.5	11.5	12	12	-	5	Urban
40th St	Hillsborough Ave	Fowler Ave	4D	Urban	5	4	12	-	12	20	12	-	12	4	5	Urban

Table 28A: Project Candidate 28 Cross Section

Adamo Drive to I-4

From Adamo Drive to I-4 the posted speed limit is 40 mph. The existing roadway is 4 lanes divided by a variable width painted and paved median. The pavement cross section is approximately 71-feet wide. Isolated raised concrete medians exist at left turn lanes. The AADT appear to indicate that a conversion from the 4 lane undivided road to a 2 lane divided road with bike lanes may be possible. This would require a detailed analysis,

particularly at the intersection with Adamo Drive. A second option is to convert the section to a 5/12/12/14/12/12/5 foot lane configuration (another option could be a 7/12/11/12/11/12/7). A third option would be to restripe the existing 72-foot/6 lane segment (4 through, two left turn) south of 3rd Avenue with 4-foot bike lanes, 10.5-foot turn lanes, and 10.75-foot travel lanes. It should be noted that, though the truck percentage is approximately 13 percent, it is 13 percent of a low volume. A detailed engineering study should be undertaken to determine the feasibility of these options and confirm the ability to drop lanes and reconfigure the SB approach at the Adamo Drive.

I-4 to Hillsborough Avenue

From Hillsborough Avenue to 19th Avenue the posted speed limit is 45 mph and reduces to 40 mph south of 19th Avenue. Total pavement width is approximately 70.5-feet wide with a 17.5-foot median. Based on the daily volumes, it appears feasible to undertake a road diet to convert the existing 6-lane divided roadway into a 4-lane divided roadway with bike lanes. Convert each direction to a 12/12/12 lane configuration. The "outside" 12-feet would be a 6-foot bike lane with a 6-foot striped out area between the bike lane and the curb. The existing pavement widths would also allow for the addition of an exclusive right turn lane if needed at intersections by decreasing the lane width to just over ten feet in addition to the bike lane. Bus turn outs would also be possible throughout the segment. Table 28B shows the 2010 AADT traffic reports for segments south of Hillsborough Avenue, from *FDOT's 2010 Florida Traffic Online* application. Turning movement counts will be required at major intersections to confirm adequate capacity.

SITE	DESCRIPTION	DIRECTION 1		DIRECTION 2		AADT TWO-WAY		"K" FACTOR	DEMAND K100	"D" FACTOR	DEMAND D100	"T" FACTOR
5099	SR569/40TH ST, SOUTH OF US92/HILLSBOROUGH AVE	N	13000E	S	12000E	25000	F	9.51F	9.15	56.00F	52	5.18P
5101	US 41/40TH ST, SOUTH OF LAKE AVE.	N	9000	S	9200	18200	C	9.51F	9.15	56.00F	52	11.46F
5102	SR 569/40TH ST, SOUTH OF SR599/MELBOURNE AVE	N	7200	S	7400	14600	C	9.51F	9.15	56.00F	52	11.46F
5350	SR 569/40TH ST NORTH OF COLUMBUS	N	6000	S	6400	12400	C	9.51F	9.15	56.00F	52	10.03A
5103	39TH ST. NORTH OF E. BROADWAY	N	4400	S	4500	8900	C	9.51F	9.15	56.00F	52	11.46F
5182	SR 569/39TH ST, N OF SR 60/ADAMO DR	N	5000	S	4800	9800	C	9.51F	9.15	56.00F	52	12.89A
AVERAGES			7434		7384	14817						10.41

AADT FLAGS : C= COMPUTED; E= MANUAL EST; F= FIRST YEAR EST; S= SECOND YEAR EST; T= THIRD YEAR EST; X= UNKNOWN
K/D FLAGS : A= ACTUAL; F= VOLUME FCTR CATG; D= DIST/FUNC. CLASS; P= PRIOR YEAR; S= STATE-WIDE DEFAULT; W= ONE-WAY ROAD
"T" FLAGS : A= ACTUAL; F= AXLE FCTR CATG; D= DIST/FUNC. CLASS; P= PRIOR YEAR; S= STATE-WIDE DEFAULT; X= CROSS-REFERENCE

Table 28B: 40th Street 2010 AADT Traffic Reports

Hillsborough Avenue to Fowler Avenue

Bike lanes exist along this section.

Other Considerations

It should be noted that the FDOT has concerns about future projected volumes, low bike volumes, and high truck percentages on the south end of 40th Street. Additionally, FDOT has a future year resurfacing project planned along the south end of 40th Street. FDOT has indicated that bike lanes will be considered at this time, without a road diet. Any proposed projects on this corridor shall be coordinated with FDOT.

Project Candidate 29 – 7th Avenue from 21st Street to 50th Street

On	From	To	Section Type	WB					Median/ TWLTL	EB				
				Drainage Type	Sidewalk	On Street Parking	Outside Lane	Inside Lane		Inside Lane	Outside Lane	On Street Parking	Sidewalk	Drainage Type
7th Ave	21st St	23rd St	2U	Urban	9	8	12	-	-	-	12	8	7	Urban
7th Ave	23rd St	24th St	3U	Urban	6	8	12	-	-	10	10	-	5	Urban
7th Ave	24th St	39th St	4U	Urban	8	-	11	10	-	10	11	-	6	Urban
7th Ave	39th St	50th St	4U	Urban	5	-	12	10	-	10	12	-	5	Urban

Table 29A: Project Candidate 29 Cross Section

21st Street to 23rd Street

The speed limit is 30 mph. The roadway is a 2-lane undivided road with two 12-foot travel lanes and bulb outs for on-street parking in both directions. It is recommended to install shared lane markings along this segment.

23rd Street to 24th Street

The speed limit is 35 mph. The roadway is a 3 lane undivided road (two EB lanes, one WB lane, and one WB on-street parking lane) with a total pavement width of 40-feet. It is recommended to install shared lane markings along this segment.

24th Street to 39th Street

The speed limit from 24th Street to 39th Street is 30 mph. This segment is a 4-lane undivided roadway with a total pavement width of 42-feet. Between 32nd Street and 34th Street, the westbound direction merges into one lane. West of 32nd Street, two westbound travel lanes pick up again. Table 29B shows the City's volume data for this segment. As shown in Table 29B, the City's AADT spreadsheet already treats 7th Avenue from 22nd Street to 34th Street as a 2-lane undivided roadway (likely due to varying lane configurations and merge/lane drops). An analysis, particularly of turning traffic should be undertaken to determine the feasibility of a lane diet on this segment to convert from a 4-lane undivided road to a 3 lane section (two travel lanes, TWLTL, and 4-foot bike lanes).

As discussed in the detailed preliminary engineering analysis (Appendix C), consideration should be give to construction of roundabouts at the signalized intersections of 22nd Street and 34th Street. Though, these improvements are anticipated to operate effectively, they are also anticipated to have significant right-of way impacts. Refer to the Appendix document for a more detailed analysis. Note that additional analysis and public involvement will be required when determining if a roundabout is appropriate.

On	From	To	Existing Road Type	Date of Count	Existing Daily Volume	AADT	Existing LOS D Capacity	Existing v/c	Existing LOS	Link Status
7th Ave	21st St	22nd St	2LU	11/16/10	7482	7408	10725	0.69	C	NON-CRITICAL
7th Ave	22nd St	34th St	2LU	07/15/08	6857	6469	15200	0.43	B	NON-CRITICAL
7th Ave	34th St	39th St	4LU	07/15/08	8306	7836	31540	0.25	A	NON-CRITICAL
7th Ave	39th St	43rd St	4LU	07/15/08	10751	10142	31540	0.32	A	NON-CRITICAL

Table 29B: 7th Avenue Lane Diet Segment Traffic Data

39th Street to 50th Street

The speed limit is 40 mph. This segment is a 4-lane undivided roadway with a total pavement width of 44-feet. Table 29B shows the available AADT data along this segment which indicates this section is only utilizing 32% of available capacity. Perform an analysis on this section for a lane diet for 3 lanes and bike lanes.

Project Candidate 30 – Columbus Drive & 17th Ave./18th Ave./19th Ave. from 14th Street to 40th Street

On	From	To	Section Type	WB								Median/ TWLTL	EB					
				North Drainage Type	North Sidewalk	Painted Area	Outside Lane	Inside Lane	On street parking	South Sidewalk	South Drainage Type		North Drainage Type	North side Sidewalk	Inside lane	Outside lane	South side Sidewalk	South Drainage Type
Columbus Dr	14th Ave	N. 34th St	2U	-	-	-	-		-	-	-	-	Rural	5	14	13	5	Urban
Columbus Dr	34th St	N. 40th St	2U	-	-	-	-		-	-	-	-	Urban	5	23	14	-	Urban
E. 19th Ave	N. 40th St	Railroad Tracks	2U	Urban	5	-	17	17	-	5	Urban	-	-	-	-	-	-	-
E. 19th Ave	Railroad Tracks	N. 29th St	2U	Urban	5	-	18	16	-	5	Urban	-	-	-	-	-	-	-
E. 19th Ave	N. 29th St	N. 22nd St	2U	Urban	5	-	11	12	-	5	Urban	-	-	-	-	-	-	-
E. 19th Ave	N. 22nd St	N. 21st St	2U	Urban	5	7	12	16	-	5	Urban	-	-	-	-	-	-	-
E. 19th Ave	N. 21st St	N. 14th Ave	2U	Urban	5	-	18	10	8	5	Urban	-	-	-	-	-	-	-

Table 30: Project Candidate 30 Cross Section

Columbus Drive and 17th Ave./18th Ave./19th Ave. are a one way pair with two lanes in each direction and speed limits of 30 mph. Pavement widths range from 23-34-feet with no on-street parking and 36-feet in locations with

on-street parking. There are two options along the one-way pairs; reduce lane widths and install bike lanes or install shared lane markings in the outside lanes.

Project Candidate 31 – Osborne Avenue from N Boulevard to 40th Street

On	From	To	Section Type	WB			Median/ TWLTL	EB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
Osborne Ave	N. Blvd	Lynn Ave	2U	Urban	8	18	-	18	5	Urban
Osborne Ave	Lynn Ave	Florida Ave	2U	Urban	-	18	-	18	4	Urban
Osborne Ave	Florida Ave	N. Central	2U	Urban	6	20	-	20	6	Urban
Osborne Ave	N. Central	N. 13th St	2U	Urban	-	12	-	12	6	Urban
Osborne Ave	N. 13th St	N. 19th St	2U	Urban	5	12	-	12	5	Urban
Osborne Ave	N. 19th St	N. 22nd St	2U	Urban	5	12	-	12	5	Urban
Osborne Ave	N. 22nd St	Railroad Tracks	2U	Urban	5	12	-	12	5	Urban
Osborne Ave	Railroad Tracks	N. 32nd St	2U	Urban	-	12	-	12	5	Urban
Osborne Ave	N. 32nd St	N. 40th St	2U	Urban	5	12	-	12	5	Urban

Table 31: Project Candidate 31 Cross Section

From North Boulevard to 40th Street, the speed limit is 30 mph. West of Central Avenue the pavement width ranges from 24 to 40-feet with on-street parking. East of I-275 pavement width is approximately 25-feet with no on-street parking. Install shared lane markings from N Boulevard to 40th Street and mark the on-street parking from N Blvd to Central Ave.

Project Candidate 32 – Hillsborough Avenue from Benjamin Road to Central Avenue

On	From	To	Section Type	WB						Median/ TWLTL	EB					
				Drainage Type	Sidewalk	Bike Lane	Outside Lane	Middle Lane	Inside Lane		Inside Lane	Middle Lane	Outside Lane	Bike Lane	Sidewalk	Drainage Type
Hillsborough Ave	Benjamin Rd	Hoover Blvd	6D	Urban	5	5	12	12	12	23	12	12	12	5	-	Urban
Hillsborough Ave	Hoover Blvd	Anderson Rd	6D	Urban	-	5	12	11	12	23	12	12	12	5	-	Urban
Hillsborough Ave	Anderson Rd	Lois Ave	6D	Urban	-	5	12	12	11	30	12	12	12	5	-	Urban
Hillsborough Ave	Lois Ave	Himes Ave	6D	Urban	5	5	11	12	11	42	11	12	12	5	-	Urban
Hillsborough Ave	Himes Ave	Central Ave	6D	Urban	5	4	12	12	11	30	11	12	12	4	-	Urban

Table 32: Project Candidate 32 Cross Section

This section has existing bike lanes. No improvements are necessary.

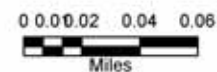
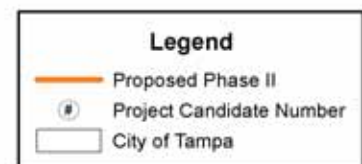
Project Candidate 33 – Hanna Avenue from Central Avenue to 40th Street

On	From	To	Section Type	WB				Median/ TWLTL	EB		
				Drainage Type	Sidewalk	Striped Area	Travel Lane		Travel Lane	Sidewalk	Drainage Type
Hanna Ave	Central Ave	I-275 Overpass	2U	Urban	5	8	19	-	11	5	Urban
Hanna Ave	I-275 Overpass	Nebraska Ave	2U	Urban	5	-	11	-	11	5	Urban
Hanna Ave	Nebraska Ave	N. 15th St	2U	Rural	5	-	10	-	10	-	Rural
Hanna Ave	N. 15th St	N. 20th St	2U	Rural	-	-	11	-	11	5	Rural
Hanna Ave	N. 20th St	N. 30th St	2U	Rural	5	-	11	-	11	-	Rural
Hanna Ave	N. 30th St	N. 40th St	2U	Urban	-	-	11	-	11	5	Urban

Table 33: Project Candidate 33 Cross Section

From Central Ave to 40th the speed limit is 30 mph and lane widths vary from 10-12-feet. This corridor also has a crossing under I-275. It is recommended to install shared lane markings through this entire section.

Project Candidate 34 – Sligh Avenue from 22nd Street to Rowlett Park Drive



On	From	To	Section Type	WB			Median/ TWLTL	EB			
				Drainage Type	Sidewalk	Travel Lane		Left Turn Lane	Travel Lane	Sidewalk	Drainage Type
Sligh Ave	22nd St	Rowlett Park Dr	3U	Urban	-	14	-	11	11	5	Rural

Table 34: Project Candidate 34 Cross Section

According to a review of the Property Appraiser database, approximately 10 to 12 feet of ROW exists along Sligh Avenue north of the edge of pavement from Rowlett Park Drive to the westernmost Tampa Electric Company (TECO) plant driveway. Construct a 10-foot multi-use path flush with the back of curb/edge of pavement. Drainage structures exist, but can be made flush with the multi-use path and traversed. Prior to programming

this improvement, conduct a detailed property records review to verify the ROW assumptions. If the ROW does not exist as depicted, there may be potential to negotiate with TECO.

From the westernmost TECO plant driveway to 22nd Street, the ROW north of Sligh Avenue widens to 25-feet off the edge of pavement. Extend the 10-foot paved multi-use path proposed above to 22nd Street near the back of ROW and tie into the sidewalk pad on the northeast corner of Sligh Avenue at 22nd Street. Figure 34 shows a sketch of this recommendation.



Figure 34: Sligh Avenue from 22nd Street to Rowlett Park Drive Recommendation

Project Candidate 35 – Rowlett Park Drive from Sligh Avenue to 22nd Street

On	From	To	Section Type	SB			Median/ TWLTL	NB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
Rowlett Park Dr	Sligh Ave	22nd St	2U	Rural	5	12	-	12	-	Rural

Table 35: Project Candidate 35 Cross Section

On Rowlett Park Drive within the analysis segment, the speed limit is 45 mph. “Share the road” signage exists along this segment. The roadway is a 2-lane undivided facility with approximately 12-foot lanes. Just south of the Rowlett Park Drive/Mulberry Drive intersection there is an existing bridge over the Hillsborough River. The bridge deck is 28.5-feet wide with 3-foot raised sidewalks on each side. Figures 35A, 35B, and 35C show the existing bridge, an aerial photograph, and the cross section. Restripe south of the Rowlett Park Drive/Mulberry

Drive intersection through the bridge with a 4/10/10/4 lane configuration and leave as undesignated bike lanes. Install share the road signs on both bridge approaches. Transition from a bike lane to a multi-use path on the west side of Rowlett Park Drive south of the bridge. Adequate ROW exists for the widening of the existing sidewalk or construction of a 12-foot shared use path.

Figure 35A: Existing Rowlett Park Drive Bridge



Figure 35B: Existing Rowlett Park Drive Bridge Aerial

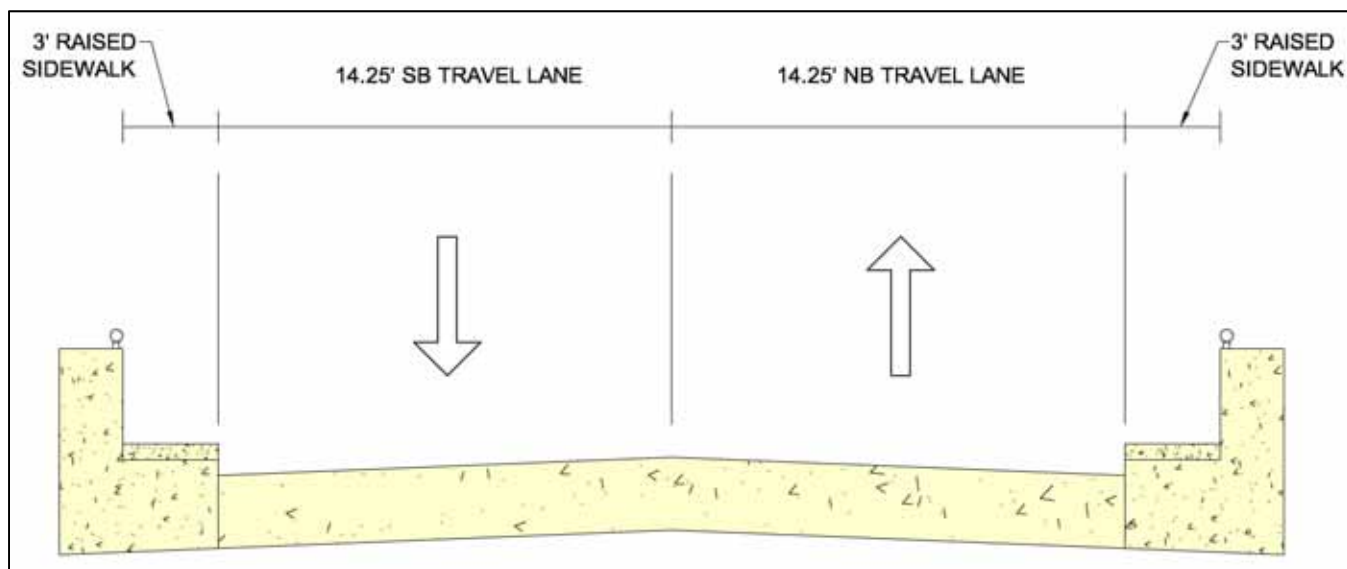


Figure 35C: Existing Rowlett Park Drive Bridge Cross Section

Project Candidate 36 – Yukon Street/River Hills Drive Corridor

On	From	To	Section Type	WB			Median/ TWLTL	EB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
Riverhills Dr	Rowlett Park Dr	22nd St	2U	Rural	5	12	-	12	5	Rural
Riverhills Dr	22nd St	Yukon St		Rural	5	12	-	12	-	Rural
Yukon St	Riverhills Dr	40th St	2U	Rural	5	10	-	10	-	Rural

Table 36: Project Candidate 36 Cross Section

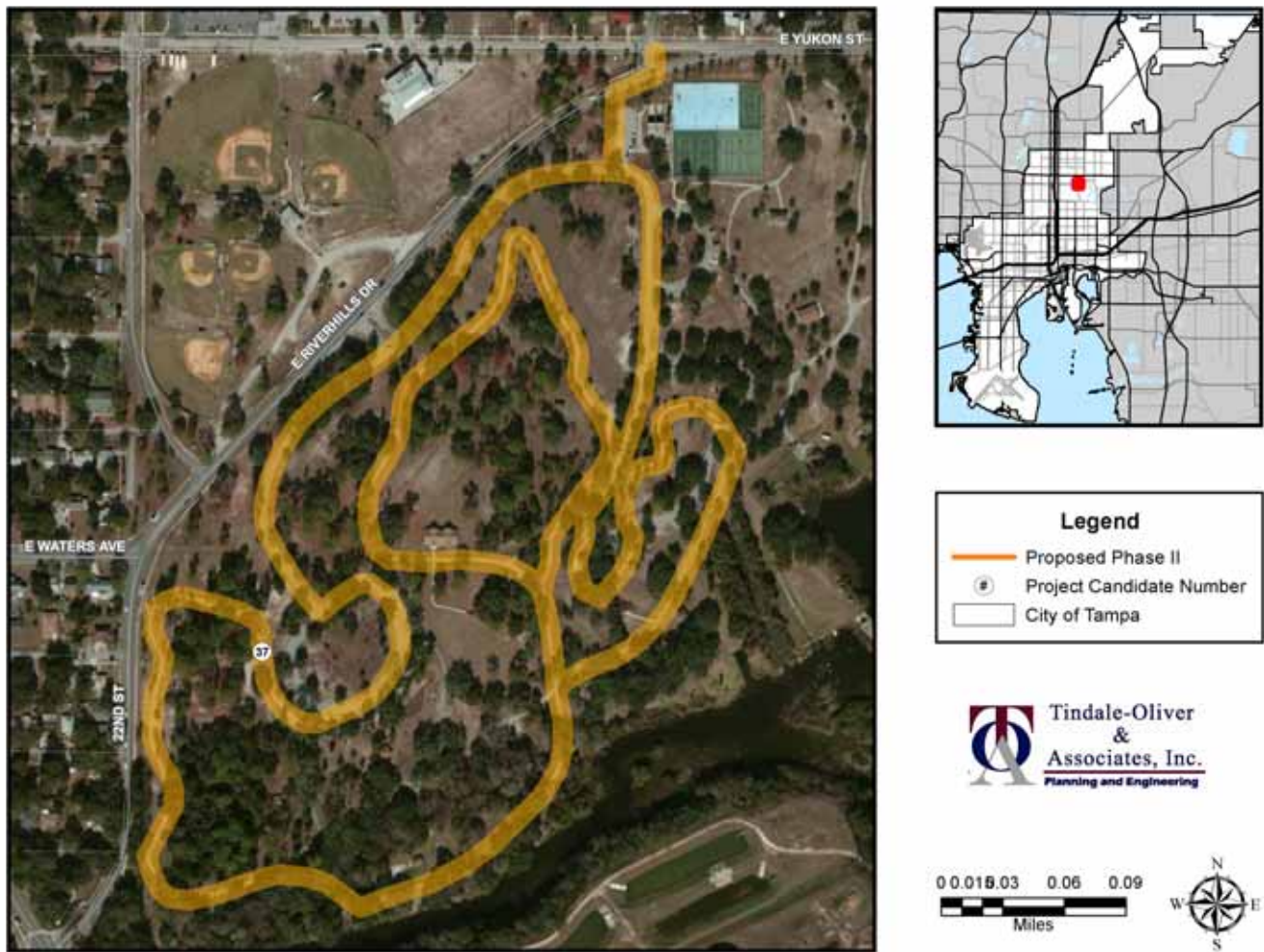
River Hills Drive/22nd Street from Rowlett Park Drive to Yukon Street

From Rowlett Park Drive to Yukon Street, River Hills Drive is a 2-lane undivided roadway with a speed limit of 30 mph. There are existing speed bumps along the section. Lane widths are approximately 12-feet. The recommendation is to install shared lane markings.

Yukon Street from River Hills Drive to 40th Street

This section is a 2-lane undivided roadway with 10-foot lanes and a posted speed limit of 30 mph. This section has existing speed bumps and asphalt curb. Utility poles and numerous residential driveways exist which would make widening the road a costly project. Therefore, the recommendation is to install shared lane markings.

Project Candidate 37 – Rowlett Park Trail



The speed limit is 30 mph along River Hills Drive. On River Hills Drive west of the intersection with 26th Street, construct an enhanced crosswalk with signage indicating a bike path exists in the park south of River Hills Drive. Construct a 12-foot wide trail from the new crossing that provides connection to the park's existing trail system south of River Hills Drive. Also construct a 12-foot wide trail connecting the two existing trails south of River Hills Drive in the vicinity of, and east of, 22nd Street and Waters Avenue. At the southwest corner of the park, construct a 12-foot wide trail connecting the existing park trail to the existing sidewalk on the south east corner of the Rowlett Park Drive/Mulberry Drive intersection.

Fill in the 60-foot sidewalk gap on the northwest corner of the Rowlett Park Drive/Mulberry Drive intersection.

Figure 37 shows a concept sketch of these improvements.

In addition to the trail connections, provide shared lane markings along the length of River Hills Drive from Yukon Street to Rowlett Park Drive as a secondary bicyclist option. Install HECW on all approaches of the Rowlett

Park Drive/Mulberry Drive intersection. It is important that this trail be adequately signed to provide guidance to the users.



Figure 37: Rowlett Park Trail Improvement Concept

Project Candidate 38 – Yukon Street from N Boulevard to River Hills Drive

On	From	To	Section Type	WB			Median/ TWLTL	EB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
Yukon St	N. Blvd	Florida Ave	2U	Rural	5	9	-	9	-	Rural
Yukon St	Florida Ave	Dixon Ave	2U	Urban	6	15	-	15	6	Urban
Yukon St	Dixon Ave	Central Ave	2U	Urban	6	27	-	15	6	Urban
Yukon St	Central Ave	Nebraska Ave	2U	Rural	-	13	-	11	6	Urban
Yukon St	Nebraska Ave	12th St	2U	Urban	-	9	-	9	5	Rural
Yukon St	12th St	Railroad Tracks	2U	Rural	5	10	-	10	-	Rural
Yukon St	Railroad Tracks	22nd St	2U	Rural	4	10	-	10	-	Rural
Yukon St	22nd St	Riverhill Dr	2U	Rural	5	11	-	11	5	Rural

Table 38: Project Candidate 38 Cross Section

N Boulevard to Florida Avenue

From N Boulevard to Florida Avenue, the posted speed limit is 25 mph. This segment is a 2-lane undivided road with 9-foot lanes. Install shared lane markings or share the road signs.

Florida Avenue to Dixon Avenue

East of Florida Avenue, the speed limit increases to 30 mph. A signalized crossing exists at Florida Avenue. The 2-lane undivided roadway has a pavement width of 30-feet. This cross section could allow for two 10-foot lanes and bike lanes but for continuity and the character of the roadway, shared lane arrows are recommended.

Dixon Avenue to Central Avenue

The 30 mph speed limit is maintained east of Dixon Avenue. This undivided section has pavement widths of 42-feet with one EB lane, one WB lane, and a WB right turn lane into the bus transfer station. The recommendation is for shared lane arrows.

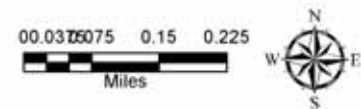
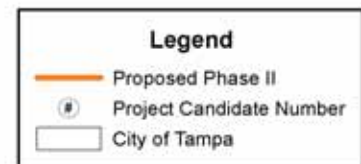
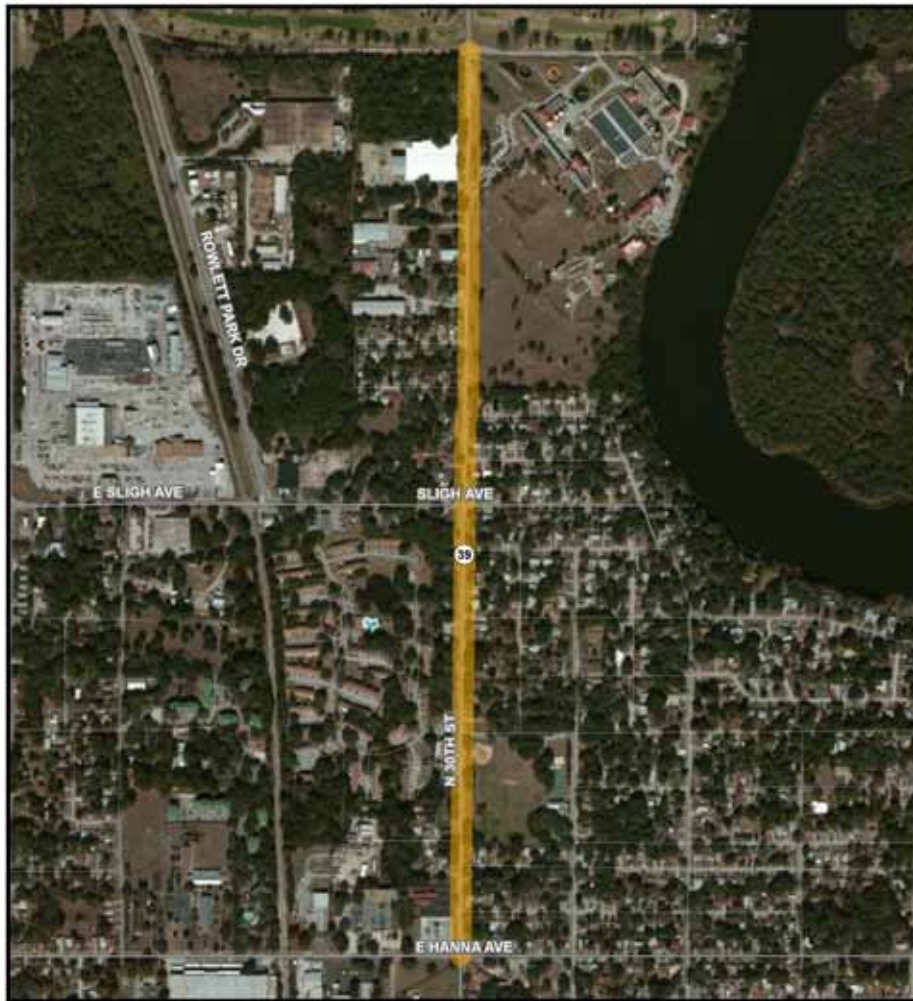
Central Avenue to River Hills Drive

An underpass exists at I-275. The speed limit is maintained at 30 mph from Central Avenue to Nebraska Avenue and 25 mph from Nebraska Avenue to River Hills Drive. Nebraska Avenue is a signalized intersection. The pavement width varies from 18 to 24-feet. Enhance the crosswalks at Nebraska Avenue to high emphasis markings. Consider signage on the east/west legs of Yukon and 12th to direct bicyclists through the skew.

Yukon Street ends west of the railroad tracks, at 17th Street, and picks up again on the east side of the tracks. Pedestrians were witnessed crossing the tracks at this location and a “worn path” was obvious as shown in Figure 38. Consider constructing a pedestrian/bicycle crossing, at grade, over the railroad tracks and complete the sidewalk along the north side from 15th Street across the railroad tracks to the receiving sidewalk on the east side. Install shared lane markings from Central Avenue to River Hills Drive. As with any at-grade rail crossing, safety and cost feasibility are a concern. Closely coordinate this project, early, with the railroad company.

Figure 38: Yukon Street Pedestrian Railroad Crossing

Project Candidate 39 – 30th Street from Hanna Avenue to Rogers Park



On	From	To	Section Type	SB			Median/ TWLTL	NB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
30th St	Hanna Ave	Sligh Ave	2U	Rural	5	12	-	12	5	Rural
30th St	Sligh Ave	Rogers Park	2U	Rural	5	10	-	10	5	Rural

Table 39: Project Candidate 39 Cross Section

Hanna Avenue to Sligh Avenue

The posted speed limit is 30 mph. The two lane undivided road has lane widths of 12-feet. It is recommended to install shared lane markings for this segment.

Sligh Avenue to Rogers Park

The speed limit is 25 mph from Sligh Avenue north to the railroad tracks and 15 mph north of the railroad tracks. The two lane undivided road has lane widths of 10-feet. It is recommended to install shared lane markings for this segment.

Project Candidate 40 – 30th Street from Yukon Street to Busch Boulevard

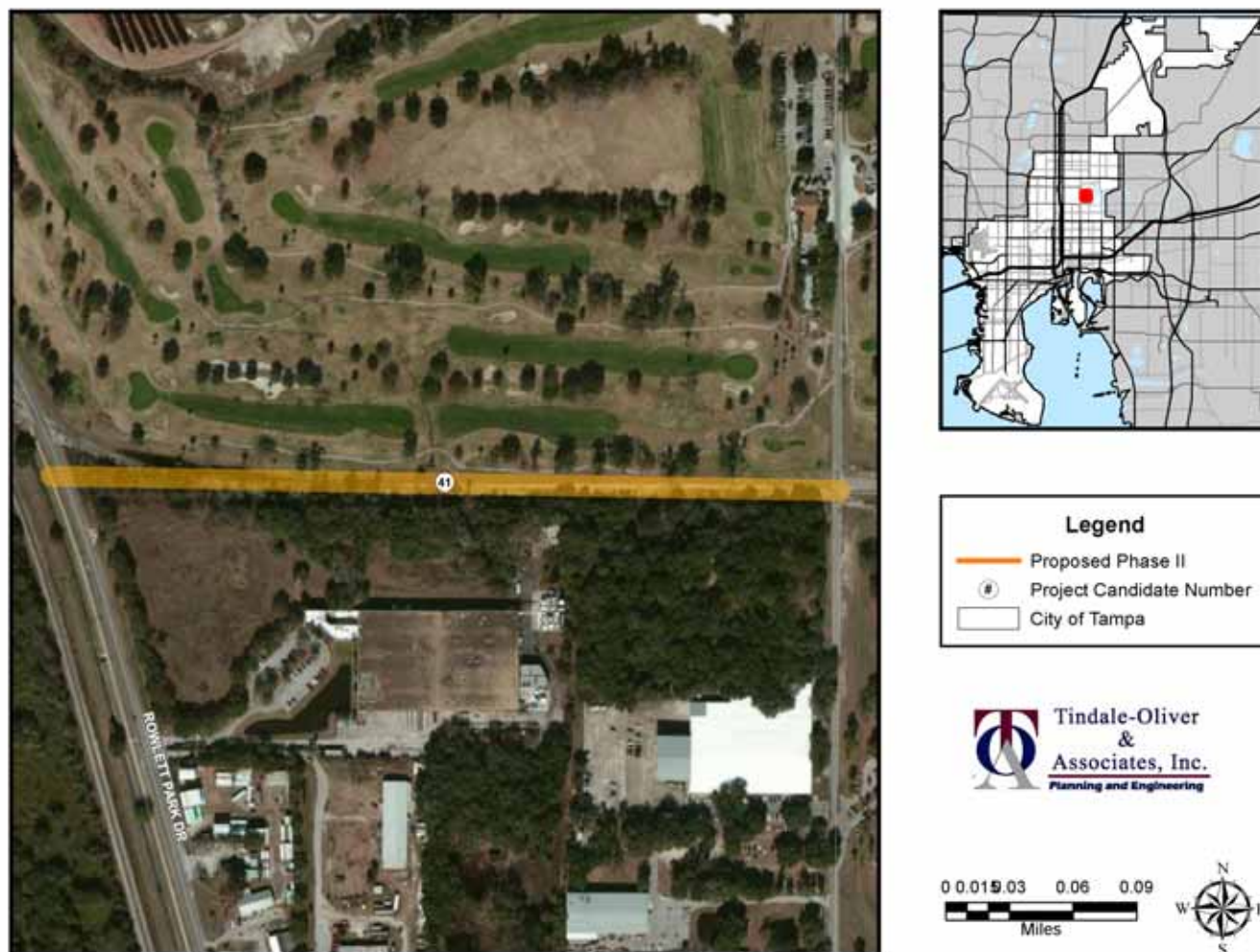


On	From	To	Section Type	SB			Median/ TWLTL	NB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
30th St	Yukon St	Busch Blvd	2U	Rural	5	14	-	14	-	Rural

Table 40: Project Candidate 40 Cross Section

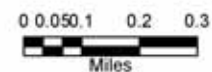
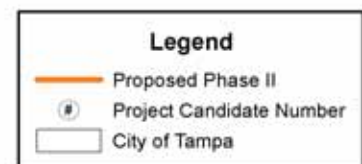
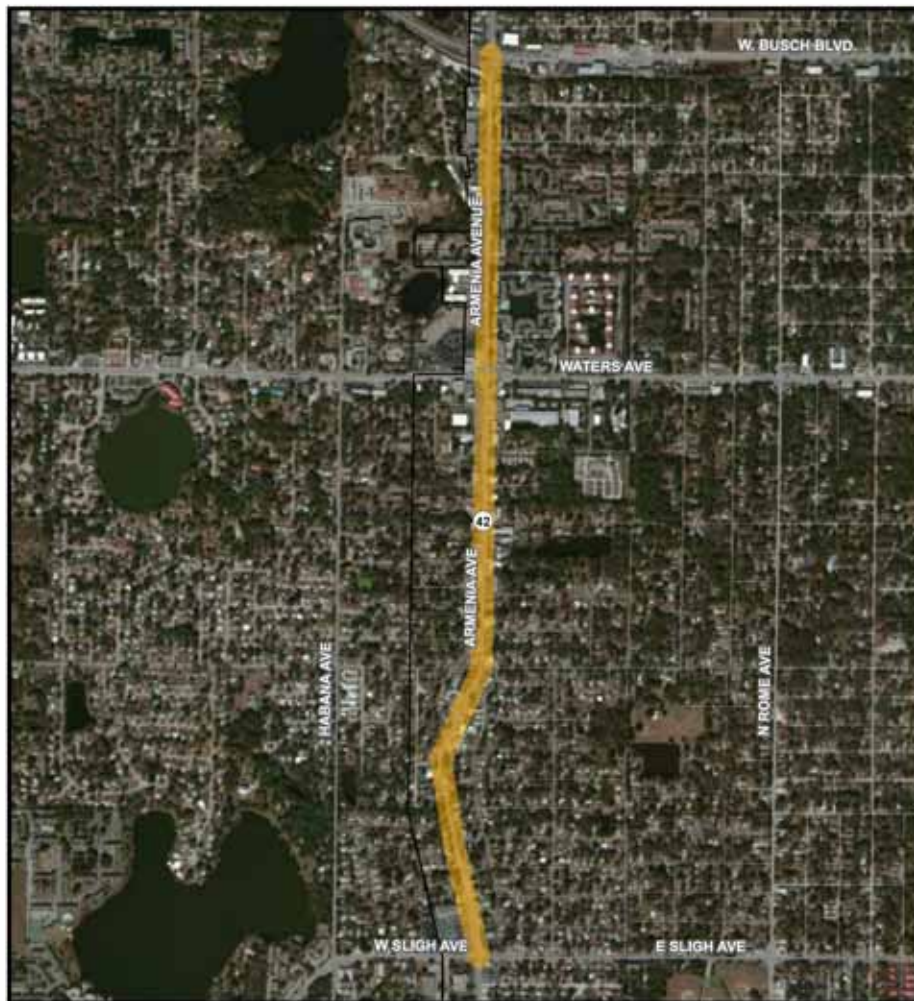
This segment of 30th Street is a 2-lane undivided roadway with a 30 mph speed limit. Lane widths are approximately 14-feet. Though bike lanes may fit, the recommendation is to install shared lane markings.

Project Candidate 41 – Parcel north of Railroad Tracks from Rowlett Park Drive to 30th Street



North of the railroad tracks, in the vicinity of what would be the Veve Lane extension, exists an approximately 70-foot wide parcel owned by the City of Tampa that runs between 30th Street and Rowlett Park Drive. The City also owns the golf course parcel to the north. Construct a 12-foot wide shared use path with lighting. This will connect the Rowlett Drive multi-use path to 30th Street for bicyclists/pedestrians wishing to continue south beyond Sligh Avenue.

Project Candidate 42 – Armenia Avenue from Sligh Avenue to Busch Boulevard



On	From	To	Section Type	SB			Median/ TWLTL	NB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
Armenia Ave	Sligh Ave	Busch Blvd	2U	Rural	-	11	-	11	-	Rural

Table 42: Project Candidate 42 Cross Section

Previous analysis of this segment shows potential for widening and reconstruction to a 2 lane enhanced section with bicycle lanes and left turn lanes at key locations. Existing ROW is being used for parking and other uses by adjacent businesses. The City should start enforcing its ROW well ahead of any widening effort. Stormwater and access management issues need to be addressed as well.

A further detailed engineering study of this roadway is recommended. This project would have significant cost and would take considerable time from concept to construction. It is recommended that analysis begin soon such that a decision can be made whether to seek future funding.

Project Candidate 43 – Kirby Street from Armenia Avenue to N Boulevard

On	From	To	Section Type	WB			Median/ TWLTL	EB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
Kirby St	Armenia Ave	N. Blvd	2U	Rural	-	12	-	12	-	Rural

Table 43: Project Candidate 43 Cross Section

From Armenia to North Boulevard, Kirby Street is a residential street with a speed limit of 25 mph. This segment is a 2-lane undivided roadway with a total pavement width of 24-feet. Swales and overhead electric poles exist near the edge of pavement on both sides of the road, which makes the possibility of widening unlikely and costly. The pavement along Kirby Street appears to be new. It is recommended to install shared lane markings.

The intersection of Kirby Street and Armenia Avenue should be reviewed for traffic signal warrant and/or a pedestrian controlled crossing (High Intensity Activated Crosswalk (HAWK) beacon or pedestrian signal).

Project Candidate 44 – Bird Street from Florida Avenue to Rowlett Park Drive

On	From	To	Section Type	WB						Median/ TWLTL	EB				
				Drainage Type	Sidewalk	Right Turn Lane	Outside Lane	Inside Lane	Left Turn Lane		Left Turn Lane	Inside Lane	Outside Lane	Sidewalk	Drainage Type
Bird St	Florida Ave	K-mart Driveway	3U	Rural	5	10	-	-	10	-	-	12	-	5	Rural
Bird St	K-mart Driveway	Dog Track Driveway	4D	Urban	6	-	12	12	12	8	12	12	12	5	Urban
Bird St	Dog Track Driveway	Nebraska Ave	4U	Rural	-	-	12	12	-	-	-	12	12	6	Rural
Bird St	Nebraska Ave	Rowlett Park Dr	2U	Rural	4	-	-	10	-	-	-	10	-	-	Rural

Table 44A: Project Candidate 44 Cross Section

Bird Street from Florida Avenue to Nebraska Avenue

Along this section, the speed limit is 30 mph. From Florida Avenue to the K-Mart driveway, Bird Street is a 3-lane undivided road (two WB lanes, one EB lane) with a total pavement width of 30-feet. From the K-Mart driveway to the dog track driveway east of I-275, Bird Street widens to a 4-lane divided highway plus left turn lanes to the I-275 on ramps. The total pavement width under I-275 is 80-feet. East of the dog track driveway to Nebraska

Avenue, Bird Street is a 4-lane undivided roadway with a total pavement width of 48-feet. Table 44B shows the City's volume data for this segment.

On	From - To	Existing Road Type	Date of Count	Existing Daily Volume	AADT	Existing LOS D Capacity	Existing v/c	Existing LOS	Link Status
Bird St	Florida Ave to I-275	4LU	10/24/06	7016	7087	17891	0.40	A	NON-CRITICAL
Bird St	I-275 to Nebraska Ave	4LU	09/08/08	4772	4633	17891	0.26	A	NON-CRITICAL

Table 44B: Bird Street Lane Diet Segment Traffic Data

Bird Street from Florida Avenue to K-Mart driveway

ROW exists north and south of Bird Street for minor widening to accommodate bike lanes. Widen for 4-foot bike lanes and tie into segment to the east. With no curb and gutter and minimal drainage impacts, the widening should be cost effective. Provide access to the River Park located west of I-275 and south of Bird Street. There is currently a chain link fence. Contact the Parks Department and request a pedestrian gate.

Bird Street from K-Mart driveway to dog track driveway

Perform a lane diet and convert outer lanes into 6-foot bike lanes. Hatch out unused pavement with chevrons. Maintain the existing turn lanes onto I-275 ramps. Convert the northbound I-275 exit ramp shared left/through lane to a through lane (since there will only be a single westbound receiving lane). Obtain a turning movement count at I-275 and Bird Street to confirm adequate intersection capacity with the proposed recommendations.

Bird Street from dog track driveway to Nebraska Avenue

Perform a lane diet and convert outer lanes into bike lanes and chevron striping. A striped pavement section exists south of the existing eastbound right turn lane at the Bird Street/ Nebraska Avenue intersection. Convert this striped area into a right turn only lane and keyhole the new bike lane between the shared through/left lane and this new lane. Provide an EB left turn lane as well. Convert the westbound approach to the Bird Street/Nebraska Avenue intersection to a shared through/left turn lane and a right turn only lane.

Figure 44 shows a concept sketch of these recommendations. *Note the use of "green" bike lanes, which is optional.*

Bird Street/Mulberry Drive from Nebraska Avenue to Rowlett Park Drive

This section has a 25 mph speed limit. Bird Street from Nebraska to Mulberry Drive is a 2-lane undivided roadway with a total pavement width of 20-feet. Bird Street dead ends at Ogontz Street. East of Ogontz Street, Mulberry Drive crosses under the railroad tracks and ties into the Rowlett Park Drive/River Hills Drive corridor. Install shared lane markings along entire Bird Street/Mulberry Drive segment past Rowlett Park Drive. From Nebraska Avenue to Ogontz Avenue, complete the sidewalk along both side of Bird Street. In the short term provide a marked crosswalk at Alaska Street and Bird Street.

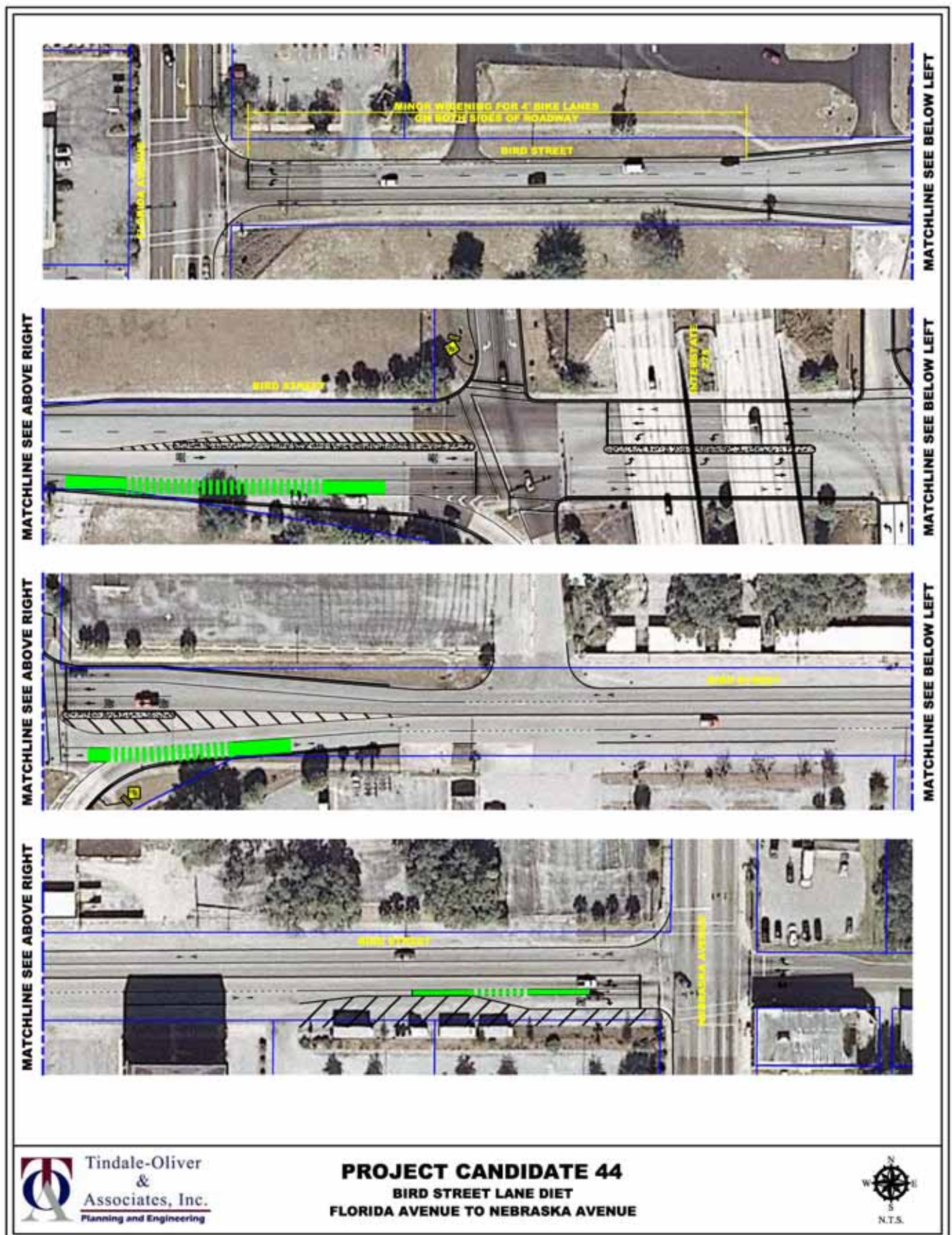


Figure 44: Concept Sketch of Bird Street Recommendations

Project Candidate 45 – Waters Avenue from Florida Avenue to River Hills Drive

On	From	To	Section Type	WB				Median/ TWLTL	EB			
				Drainage Type	Sidewalk	Outside Lane	Inside Lane		Inside Lane	Outside lane	Sidewalk	Drainage Type
Waters Ave	Florida Ave	Nebraska Ave	4U	Urban	5	12	12	-	11	11	5	Urban
Waters Ave	Nebraska Ave	Rowlett Park Dr	2U	Rural	5	11.5	-	-	-	11.5	5	Rural
Waters Ave	River Hills Dr	22nd St	2U	Urban	5	11.5	-	-	-	11.5	5	Urban

Table 45A: Project Candidate 45 Cross Section

Florida Avenue to Nebraska Avenue

From Florida to Riverhills Drive, the speed limit is 45 mph. This segment is a 4-lane undivided road with a total pavement width of 46-feet plus widening for turn lanes at the intersections. The segment runs under I-275 but has no access. Restripe this section with a 5-foot bike lane and one 12-foot travel lane in each direction plus a

13-foot median. Collect TMCs and perform a traffic study to best determine lane configuration at the Waters Ave/Florida Ave intersection. Consider installing a pedestrian median refuge island on Waters Avenue at Seminole Avenue.

Remove the concrete median on the eastbound approach to the Waters Avenue/Nebraska Avenue to accommodate a bike lane that keyholes between the through and right turn lanes. Table 45B shows City's volume data for this segment. Convert the westbound approach to the Waters Avenue/Nebraska Avenue intersection to a left turn lane and a shared through/right turn lane.

On	From - To	Existing Road Type	Date of Count	Existing Daily Volume	AADT	Existing LOS D Capacity	Existing v/c	Existing LOS	Link Status
Waters Ave	Florida Ave to Nebraska Ave	4LU	11/09/10	12134	12134	17891	0.68	C	NON-CRITICAL

Table 45B: Waters Avenue Lane Diet Segment Traffic Data

Nebraska Avenue to River Hills Drive

The 2-lane undivided section from Nebraska Avenue to River Hills Drive has a posted speed of 30 mph. The total pavement width of 22 to 24-feet can accommodate shared lane markings. Additionally, consider installing a marked crosswalk at 20th Street.

Project Candidate 46 – 113th Ave./47th St. (Greco Softball Complex) from Whiteway Drive to 50th Street



On	From	To	Section Type	SB/EB			Median/ TWLTL	NB/WB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
113th Ave/47th St	Whiteway Dr	50th St	2U	Urban	-	12	-	12	-	Urban

Table 46: Project Candidate 46 Cross Section

Construct a sidewalk along the east side of 47th Street and the south side of 113th Avenue. Sidewalk along the east side of 50th Street was proposed as part of Walk-Bike Phase I. Install high emphasis midblock crossings at the park road's intersection with 50th Street and Whiteway Drive. Figure 46 illustrates these recommendations.



Figure 46: Greco Softball Complex Improvements

Project Candidate 47 – Bruce B. Down Boulevard from Fowler Avenue to Fletcher Avenue

Fowler Avenue to Pine Drive

Construct a sidewalk along the east side. Use University of South Florida property and construct sidewalk east of the existing berm. Tie into the existing sidewalk at the existing bus stop adjacent to the NB right turn lane at the Bruce B Downs Blvd/Pine Drive intersection. Figure 47 shows a sketch of this recommendation.

Pine Drive to Fletcher Avenue

Construct a sidewalk along the east side. Fill and/or a retaining wall may be needed along a portion of the lake north of University Square Drive. Match the cross slope of the shallow swale that exists along portions of the east side. Piping of the swale or a retaining structure with flumes may be necessary adjacent to the northbound right turn lane at Holly Drive.

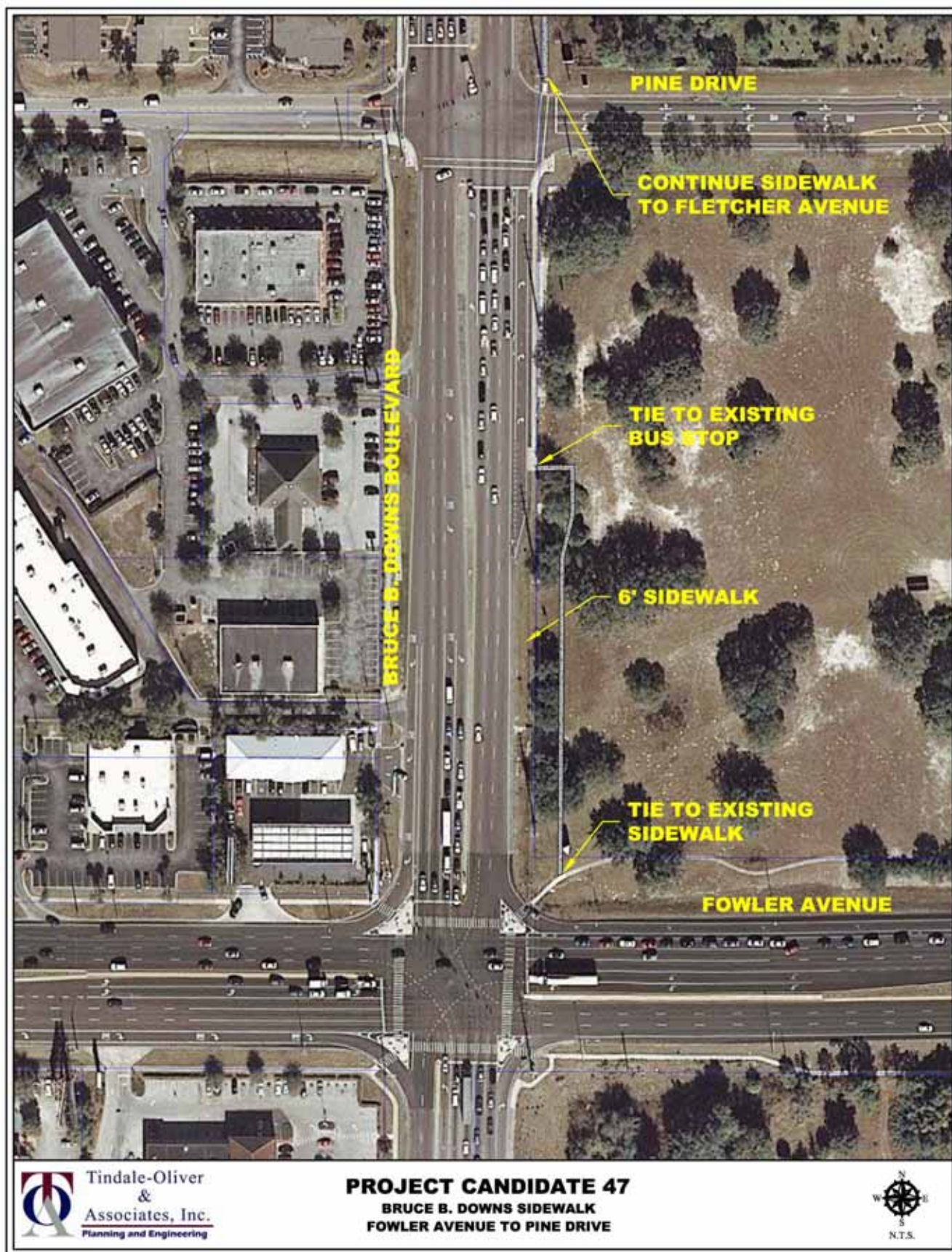
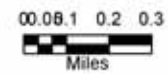
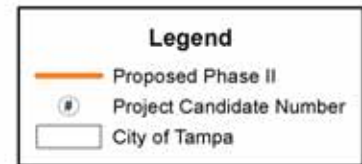
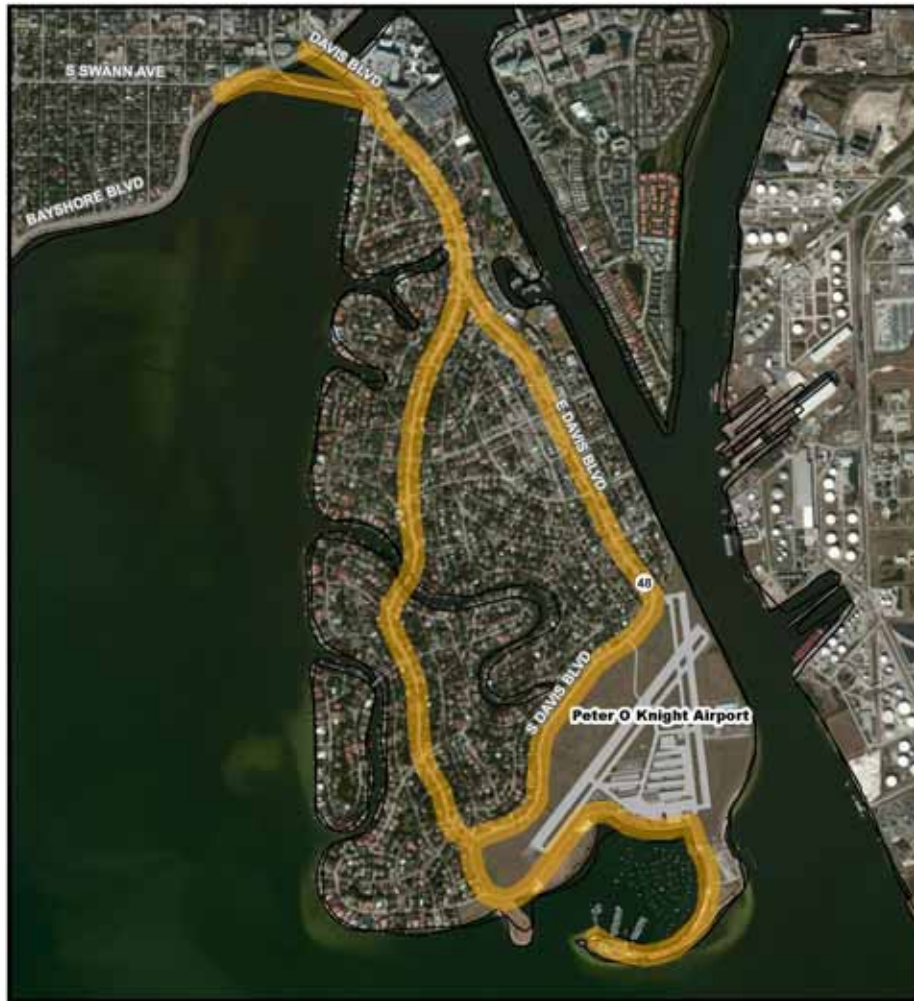


Figure 47: Bruce B. Downs Sidewalk – Fowler Avenue to Pine Drive

Project Candidate 48 – Davis Islands



On	From	To	Section Type	SB/EB					Median/ TWLTL	NB/WB				
				Drainage Type	Sidewalk	On-street Parking	Outside Lane	Inside Lane		Inside Lane	Outside Lane	On-street Parking	Sidewalk/ Sidepath	Drainage Type
Severn Avenue	Davis Yacht Club	S. Davis Island Blvd	2U	Rural	-	-	9	-	-	-	9	-	-	Rural
S. Davis Blvd	Severn Ave Roundabout	Hudson Ave	2U	Urban	-	-	26	-	-	-	26	-	12	Urban
W. Davis Blvd	Severn Ave Roundabout	Biscayne Ave	2U	Urban	5	-	22.5	-	-	-	22.5	-	5	Urban
W. Davis Blvd	Biscayne Ave	Davis Blvd	4U	Urban	8	-	17.5	10	-	10	17.5	-	8	Urban
E. Davis Blvd	Hudson Ave	Chippewa Ave	2U	Urban	5	-	22.5	-	-	-	22.5	-	5	Urban
E. Davis Blvd	Chippewa Ave	Chesapeake Ave	3D	Urban	10	12	12	-	12	-	12	12	10	Urban
E. Davis Blvd	Chesapeake Ave	Barbados Ave	2U	Urban	10	8	12	-	-	-	12	8	10	Urban
E. Davis Blvd	Barbados Ave	Davis Blvd	3D	Urban	10	8	15	-	16	-	15	8	10	Urban
Davis Blvd	E. Davis Blvd	Davis Island Bridge	4U	Urban	10	8	11	11	-	11	11	8	10	Urban

Table 48: Project Candidate 48 Cross Section

Severn Avenue/Martinique Avenue from Davis Island Yacht Club to S Davis Island Boulevard

Speed limit is 25 mph. Install shared lane markings.

S Davis Boulevard from Severn Avenue Roundabout to Hudson Avenue

The speed limit is 30 mph west of Mamora Avenue and 35 mph east of it. Pavement width is 52-feet. There is an existing multi-use path along the south side of S Davis Boulevard. Add a trail/sidewalk connection from the southeast side of the Severn roundabout to the existing multi-use path to provide better bicyclist access. Relocate the crosswalk across Channel Drive closer to S Davis Boulevard so that bicyclists can transition into the bike lanes along the roadway to the north. Perform a parking utilization study to determine the parking demands. If on-street parking is needed, restripe with 8-foot parking along the residential side of the road, 4-foot bike lanes, and 12-foot travel lanes. If not, restripe with 6-foot bike lanes and 12-foot travel lanes and stripe off the remaining pavement to the curb.

W Davis Boulevard from Severn Avenue Roundabout to Biscayne Avenue

The speed limit is 35 mph from Biscayne Boulevard to Blanca Avenue. From Blanca Avenue to Riviera Drive the speed limit is 30 mph. From Riviera Drive to the Severn Avenue roundabout the speed limit is 35 mph. This segment is a 2-lane undivided road with 45 feet of total pavement width, except in the vicinity of the bridge south of Erie Avenue, which has a 35-foot pavement width and 5-foot sidewalks on each side.

For the bridge and its approaches convert the section to two 11-foot travel lanes with 6.5-foot bike lanes as shown in the 35-foot Roadway Section in Figure 48A. For the remainder of the segment convert to the 45-foot Roadway Section shown in shown in Figure 48B.

W Davis Boulevard from Biscayne Avenue to Davis Boulevard

The speed limit is 35 mph. This segment is a 4-lane undivided roadway with a total pavement width of 55-feet. Convert to a 3-lane section with bike lanes and on-street parking as shown in the 55-foot Roadway Section in Figure 48C.

E Davis Boulevard from Hudson Avenue to Chippewa Avenue

The speed limit is 35 mph. This segment is a 2-lane undivided section with on-street parking and a pavement width of 45-feet. Perform a parking utilization study to determine the parking demands. If on-street parking is necessary, restripe with an 8/14.5/14.5/8 foot lane configuration and shared lane markings. If parking is not necessary, restripe for bike lanes with a 5/11/13/11/5 foot lane configuration.

E Davis Boulevard from Chippewa Avenue to Chesapeake Avenue

The speed limit is 30 mph north of Chesapeake Avenue. This segment is a 2-lane undivided section with on-street parking and a pavement width of 60-feet. Perform a parking utilization study to determine the parking demands. If on-street parking is necessary, restripe with an 8/14.5/14.5/8 foot lane configuration and shared lane markings. If parking is not necessary, restripe for bike lanes with a 5/11/13/11/5 foot lane configuration.

E Davis Boulevard from Chesapeake Avenue Barbados Avenue

The speed limit is 30 mph. The existing segment is a 2-lane undivided roadway with angled parking adjacent to it, separated by a paved buffer. Immediately north and south of Barbados Avenue, Biscayne Avenue, and Chesapeake Avenue, the roadway narrows through bulb outs to a 2-lane undivided section with a total pavement width of 40-feet. Continue the shared lane markings through these bulb outs and the rest of the segment.

E Davis Boulevard from Barbados Avenue to Davis Boulevard

The speed limit is 30 mph. This segment is a 3-lane section with one travel lane in each direction, a TWLTL, and 8-foot on-street parking on both sides. Total pavement width is 46-feet. Restripe with 8-foot parking and a 14-foot travel lane with shared lane markings in each direction plus a 12 to 18-foot median.

Davis Boulevard from E Davis Blvd/W Davis Blvd split to Davis Island Bridges

The City is currently studying this segment and will determine the recommendations. As an alternate corridor install shared lane markings on Columbia Drive from Davis Boulevard to Hudson Avenue.

Davis Islands Bridges from Davis Islands to Mainland

We recommend a detailed review of a new bridge for pedestrian/bike traffic. The existing pedestrian bridge is narrow and not well lit. On-road is dangerous because of the merge/weave maneuvers. See previous pedestrian/bicycle recommendations from Walk-Bike Phase I.

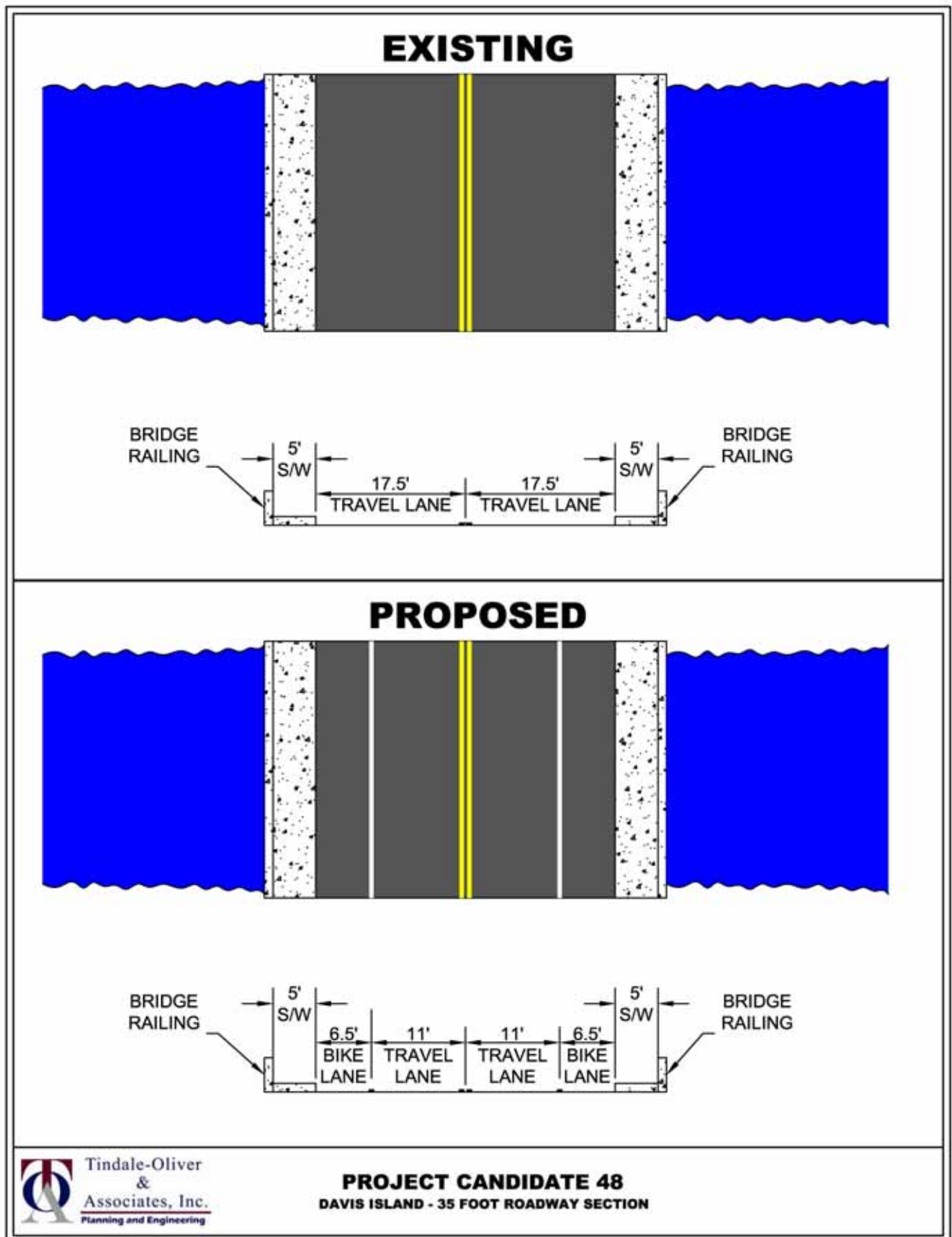


Figure 48A: Davis Island Proposed Improvements – 35-foot Roadway Section

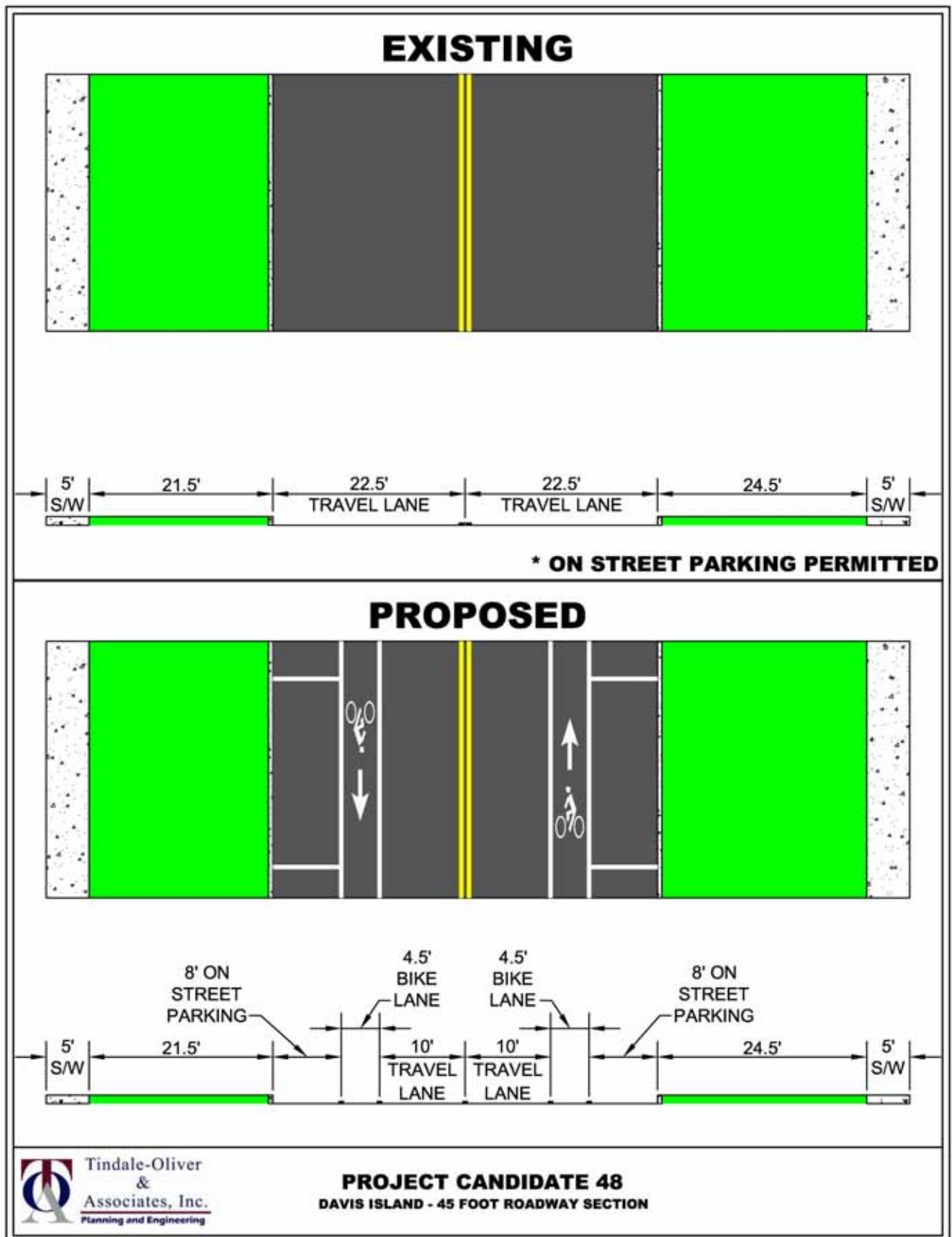


Figure 48B: Davis Island Proposed Improvements – 45-foot Roadway Section

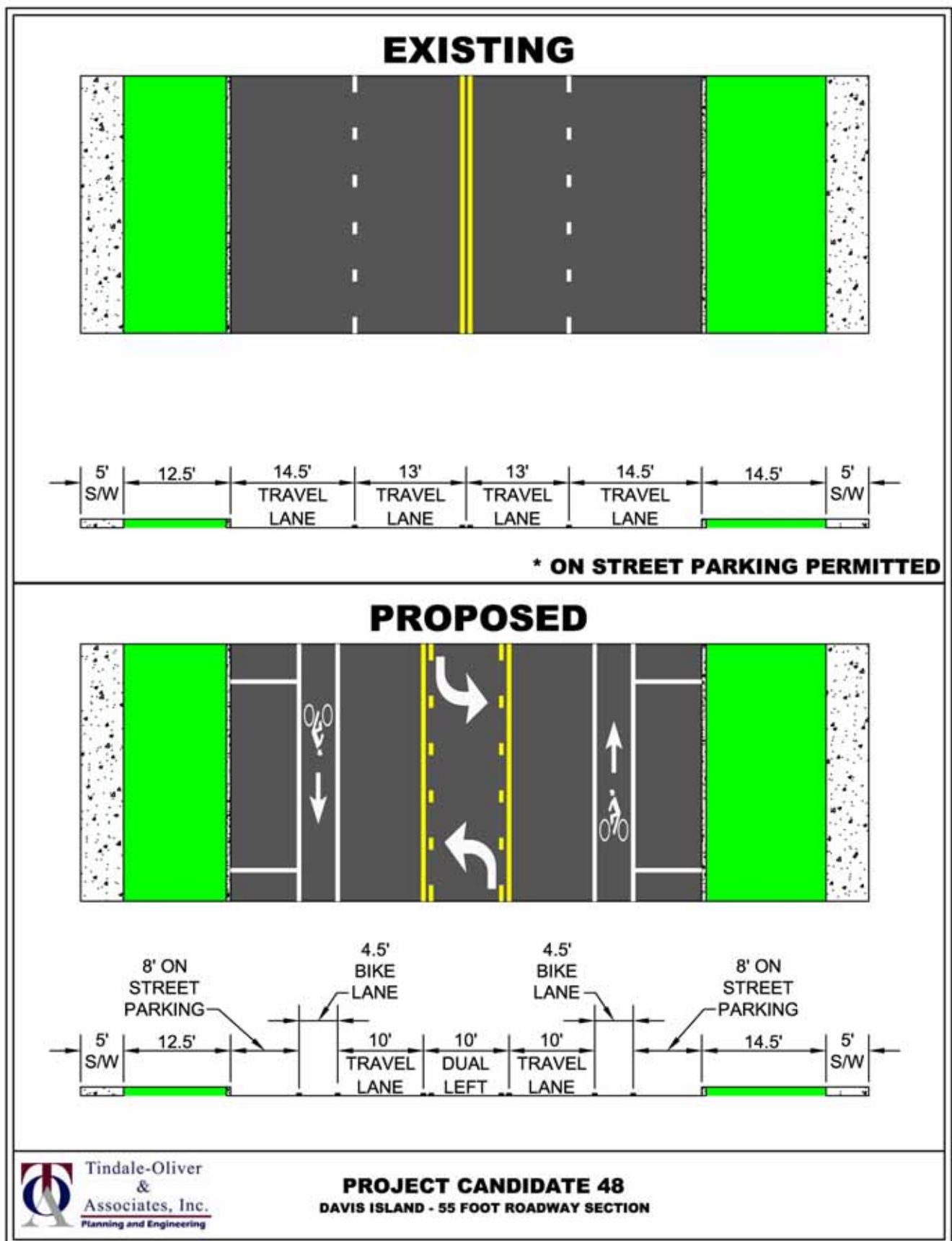
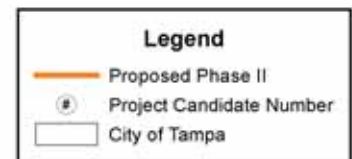


Figure 48C: Davis Island Proposed Improvements – 55-foot Roadway Section

Project Candidate 49 – S Harbour Island Blvd/Franklin St from Knights Run Ave to Greco Plaza

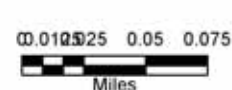
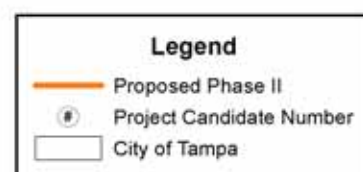


On	From	To	Section Type	SB			Median/ TWLTL	NB		
				Drainage Type	Sidewalk	Travel Lane		Travel Lane	Sidewalk	Drainage Type
S. Harbour Island Blvd	Knights Run	Bridge	2U	Urban	-	15	-	15	5	Urban
S. Harbour Island Blvd	Bridge	Greco Plaza	2U	Urban	12	15	-	15	12	Urban

Table 49: Project Candidate 49 Cross Section

The speed limit along Franklin Street/Harbour Island Boulevard is 30 mph and this section is 2-lanes undivided. It is recommended to install shared lane markings.

Project Candidate 50 – Beneficial Drive from Knights Run Avenue to Channelside Drive



On	From	To	Section Type	SB				Median/TWLTL	NB			
				Drainage Type	Sidewalk	Outside Lane	Inside Lane		Inside Lane	Outside Lane	Sidewalk	Drainage Type
Beneficial Dr	Knights Run	Bridge	4D	Urban	5	12	12	13	12	12	5	Urban
Beneficial Dr		Bridge	4D	Urban	5	13	13	4	12	12	5	Urban
Beneficial Dr	Bridge	Channelside	4D	Urban	5	12	12	6	12	12	5	Urban

Table 50: Project Candidate 50 Cross Section

Knights Run Avenue to Bridge

From Knights Run to the Bridge, the speed limit is 40 mph. This segment is a 4-lane divided roadway with 12-foot lane widths. Install shared lane markings and consider a speed reduction to 35 mph. The section is only approximately 1,000-feet.

Beneficial Drive Bridge

The speed limit across the bridge is 40 mph. The bridge is a 4-lane section divided by a raised concrete median. Lane widths on the bridge are 12-13-feet plus a 5-foot raised sidewalk. Restripe with a 5/12/10/Median/10/12/5 foot lane configuration (also consider 11-foot outside lanes) as shown in Figure 50A. Consider a speed reduction to 35 mph as this is a short section connecting low speed, residential Harbour Island to Downtown.

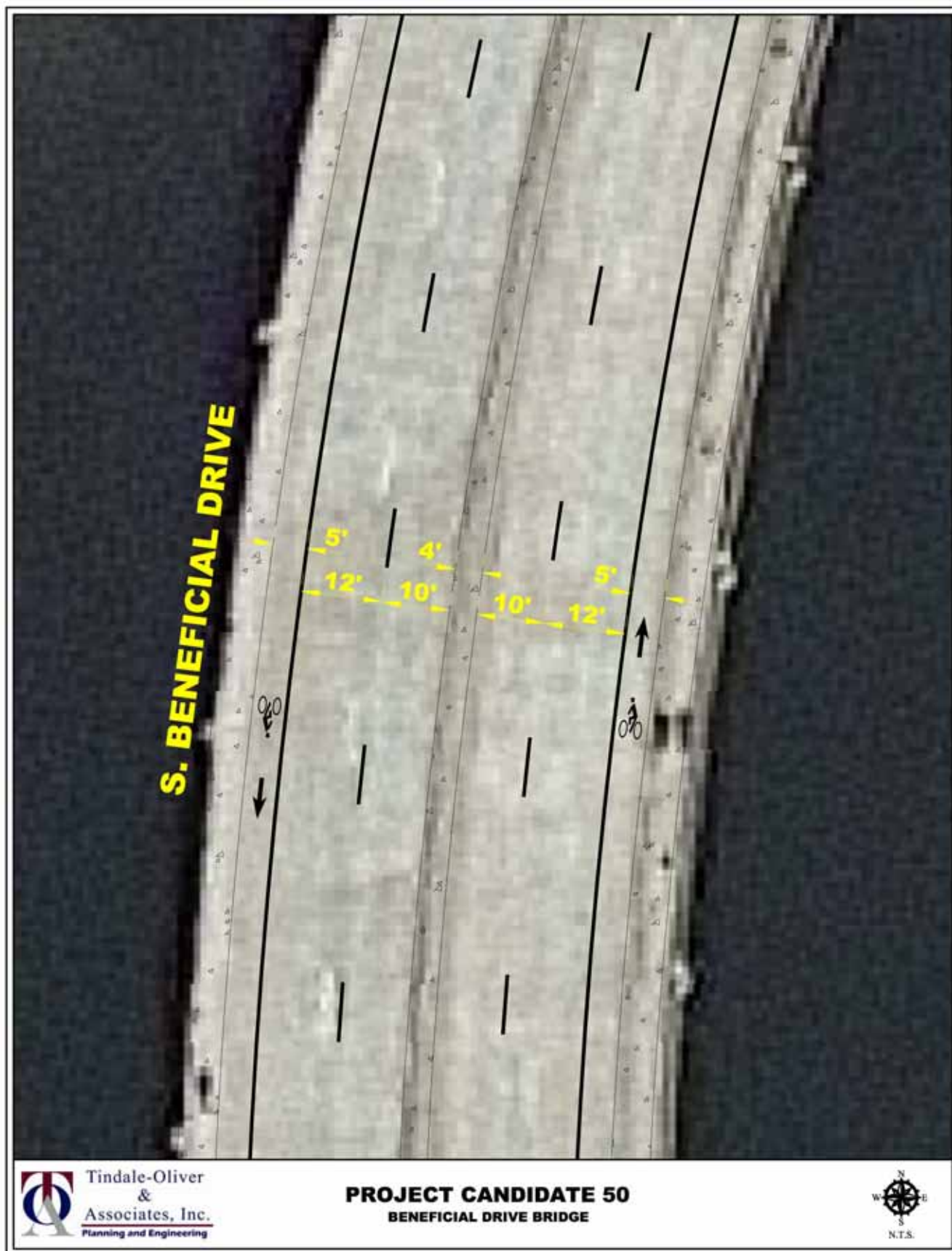


Figure 50A: Beneficial Drive Bridge

Bridge to Channelside Drive

From the Bridge to Channelside Drive, the posted speed limit remains 40 mph. This segment is a 4-lane divided roadway with 12-foot lane widths. The recommendation is to install shared lane markings.

Construct a ramp transition from the Riverwalk onto SB Beneficial Drive for bicyclists. In the short term, at the intersection of Beneficial Drive and Channelside Drive, narrow the NB left turn lane and the inside NB through lane to provide a wider outside NB through lane with shared lane markings. In the long term, eliminate the concrete separator and start a NB bike lane. Figure 50B illustrates this concept.



Figure 50B: Beneficial Drive at Channelside Drive Long Term Improvements

Potential Complete Street Projects

Complete Street projects consist of lane reductions to accommodate elements such as bike lanes, on-street parking, paved shoulders, sidewalks, etc. Table A summarizes the list of roadways with potential for Complete Street projects, some of which have already been discussed in this report.

Further discussion with the City and FDOT should occur to determine which projects to move forward. Please note that these projects are identified as potential candidates at this time. Close coordination with impacted neighborhoods, adjacent businesses will be necessary. In some instances, a detailed engineering analysis will be required to document the impacts of these projects and determine viability.

Roadway	From	To	Lanes/Median		AADT		Proposed
			Existing	Potential	Low	High	LOS E Capacity*
Bay to Bay Boulevard	Manhattan Avenue	Bayshore Boulevard	4U	2D	13000	18200	17,000
Henderson Boulevard	Manhattan Avenue	Kennedy Boulevard	4U	2D	9500	19000	17,000
7th Avenue	22nd Street	39th Street	4U	2D	7500	8000	17,000
Bird Street	Florida Avenue	Nebraska Avenue	4U	2D	4500	7100	17,000
Waters Avenue	Florida Avenue	Nebraska Avenue	4U	2D	12100	12100	17,000
34th Street	Lake Avenue	Martin Luther King	4U/4D	2D	8700	8700	17,000
40th Street	Hillsborough Avenue	Columbus Drive	6D	4D+HOV	15700	25800	35,100
Armenia Avenue	Sligh Avenue	Busch Boulevard	2U	2D/2E	14100	15900	17,000

Table A: Potential Complete Street Projects

The following 10 maps show the proposed Walk-Bike Phase II Shortlisted Projects. See Appendix A for Project Shortlist Summary Tables. See Appendix B for a Transit Stop Analysis.

